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ABSTRACT

This panel study was designed to measure the adoption level over a period of one year for a set of ten reading programs being promoted by NIE/HEW. One panel sample included 200 randomly selected school districts; a second panel sample included 100 school systems that had ordered one or more booklets describing the programs by returning a coupon from a brochure mailed to announce the program. Interview data on the main and control samples were collected four times by telephone, at intervals of two to three months; control samples were interviewed concurrently with the second, third, and fourth phases of data collection. Among the many findings discussed were positive relationships between adoption of the programs and external contact (for example, access to university and percent of IRA members) and between adoption and exposure to messages about reading programs. Appendixes detail the data collection instruments, feedback from demonstration centers, elementary linkage analysis, and tabulations of data. (AA)

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AN INVESTIGATION OF COMMUNICATION EFFORTS AND THEIR RELATION TO STAGES OF ADOPTION OF SELECTED READING PROGRAMS

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CHAPTER I

A. Introduction

There is, of necessity, some gap in time between the development of a new technology and its implementation. Depending on many factors, this lag may be minutes or centuries. If the new technology is a significant improvement over the old, the time between development of the innovation and implementation represents a significant loss to the society. Therefore, it would be in the interest of efficiency for the system to find ways to minimize the time gap.

In order to accomplish this, a number of questions must first be answered:

1. What are the factors involved in the diffusion of innovations, and what is the relative importance of each?
2. In what ways are the factors interrelated?
3. Which of these factors are amenable to change?
4. Will the proposed changes cause other problems?

Specifically, the problem is to find ways to shorten the time between development and implementation of educational innovations on a national level within the United States. These methods must meet the following criteria:

1. Not violate other important values (such as the autonomy of local school systems, an individual's right to privacy, etc.);
2. be reasonably economical;
3. not be overly complex;
4. capable of being tested;
5. capable of being easily communicated.

To state it another way, an objective of this project is to develop innovations and to introduce other innovations. The innovations in communica-

tion must themselves have the qualities that make for successful diffusion. It is expected that recommendations growing out of this project will improve the communication of innovations among school systems.

Another section of this report will review the major findings of past research pertaining to diffusion. This research has identified a large number of variables, which can be grouped under five headings:

1. Characteristics of the innovation itself.
2. Characteristics of messages concerning the innovation.
3. Characteristics (or perceived characteristics) of the sender of the message.
4. Characteristics of the channels through which the messages flow.
5. Characteristics of the receiver. The receiver in this case would be the decision making unit, whether an individual or group.

Of special interest in this study will be how organizational structure, patterns of external contact and decision making patterns of the receiving group affect acceptance of the innovation.

Obviously the system is composed of a very large number of components, and is highly complex. This complexity is further increased by the interrelatedness of a number of these factors. For example, no one channel is always best. For one purpose and audience, an educational journal might be best; for another, perhaps regional conventions would be the best channel.

By now it can be seen that even a study of gargantuan scope could not cover every facet of the problem. This study will of necessity leave many questions unanswered. How then were certain elements selected for inclusion in this study.

First, the scope of the problem was reduced considerably by studying a specific problem. Thus we limit ourselves to the characteristics of a partic-

ular set of innovations, message systems, sending systems, several specific channels, and several sub-groups of receivers. The strength of this method is that it allows us to focus on a concrete example of a problem similar to those that are expected to recur. The weakness of the method is that the findings can only be generalized to situations similar to the specific situation covered. However, these specific findings will contribute to the available literature in the field, adding to the general fund of knowledge.

Secondly, the scope of the problem to be studied is limited by relating it to past findings in the field. Principles already well established do not have to be restudied. Perhaps even more importantly, past research identified those variables which seem to have the most potency, that is, that account for more change than others. This allows us to concentrate our efforts where the potential for useful fundings is greater.

And finally, the scope of the problem had to be limited to meet time, cost, and manpower requirements of the study, as well as limitations caused by available methodology. This was done through consultation with personnel in the National Institute for Education in HEW. They were especially interested in trying to identify the impact of various types of communication contact on adoption of the new method.

Thus, the study looks at a concrete example of a communication strategy with the purpose of finding answers to practical questions of future communication strategies.

The dependent variables for this study are amount and rate of adoption. In other words, we will look at those things which are taken as measures of whether or not adoption of a new idea has taken place, and if so, how long it took.

Factors related to adoption can be divided into two main categories:

1. Individual level

   a. Age of staff member

   b. Teaching experience

   c. Exposure to various media, including interpersonal contact with other educators.

   d. Autonomy of the individual in the decision making process. Voluntary versus complaint innovation, individual versus group decision making and adoption.

   e. Norms and values regarding innovations

   f. Present level of satisfaction with present methods

   g. Perceived advantage of innovation

   h. Resources available for implementation

   i. Education of staff person

2. Group or organizational level. The group is made up of individuals upon which each of the above factors would have an effect, with the following factors coming into play:

   a. Size of the decision making group

   b. Complexity of the organizational structure of the group

   c. Decision making pattern of the group, i.e., who gets involved in the decision, at what points in the process and to what extent.

   d. Autonomy of the group. How much "say" do they have in the total system.

   e. Diversity of opinion within the decision making unit

This interest in this study will be focused particularly on the relationships between the various factors. A useful piece of information, for example, would be whether or not one medium is equally effective at every stage of the decision making process, or if different media are more effective at differing stages. Also, a study will be made through factor analysis to

determine if a number of the variables found can be subsumed by some underlying factor.

Another way of looking at the questions this study shall attempt to answer is to categorize them according to whether or not we have any theoretical basis to predict the finding in advance. Some measures will be useful to gain information specific to the NIE situation, other information will be useful to confirm (or fail to confirm) an expectation generated by hypotheses from past studies. A number of such hypotheses will be specified later in this report.

Some of the anticipated findings of the study would be linear in form, for example, as exposure to professional journals increases, the level of adoption of innovations contained in them increases. It is expected that the study also will generate a large number of interrelated statements which are circular in nature, such as: When the climate of an organization becomes more open, the innovativeness of the organization increases and in turn the climate becomes more open. However, because of confusing patterns of relationships, it may not be clear on the basis of such statements what action should be taken to minimize the time for adoption of innovations.

A typological analysis may be useful, therefore, in an attempt to identify groups of people who have several characteristics in common. If typologies are identified which operate in different ways within the adoption process, then more useful strategies can be devised. One typology might, for example, have certain attitudes about innovations, certain media habits, a certain level of organizational complexity, etc. Strategies to reach this group can then be quite specific.

It is important to realize that the diffusion of innovations is a complex

problem which is further complicated when placed in an organizational context. The following sections of this report will attempt to review the bodies of literature about diffusion processes, organizational communication and a systemic approach through which these processes may be viewed.

B. Review of Previous Work

The question which seems appropriate to ask at this point is: What are the organizational variables which are associated with school systems adopting new practices in the education of their students? An understanding of the factors in the organization which play a contingent role in the adoption process is essential.

A number of different types of organizational factors have been identified in a review of past writing including: (1) structural-functional factors, (2) communication and participation variables, and (3) system approaches which examine interdependencies between a number of variables. This section will attempt to review some of the past research in this area in an effort to identify the types of organizational variables which are most appropriate in the study of diffusion of innovations.

The structural-functional approach to organizations is characterized by the positions which are held in an organization, and the relationships which exist between these positions. This hierarchical approach is often associated with Talcot Parsons (1951) and Max Weber (1947). Max Weber's (1947) description of organizations was a sociological model that stressed a machine theory approach. Some of the variables which Weber specified as characterizing an organization were: (1) Standardized rules which routinized the operation of the organization, (2) Specialization of roles due to division

of labor, (3) Hierarchical structure of authority, each person receiving orders from one person above him and giving orders to one person below him, (4) Depersonalization of human relationships.

Weber's organizational approach is based almost entirely on the communication channels which "ought" to exist according to the organizational flow chart. This limitation to the prescribed channels seems artificial and has led to more descriptive sociometric network approaches which examine other structural communication relationships.

Communication network studies have explored small group communication patterns and their effect upon two rather general dependent variables, namely, efficiency in task accomplishment and member satisfaction in the task performance. Due to the simplified conceptualizations involved in these studies, cautious generalizability is possible in a wide variety of situations including complex organizations.

One of the first major studies dealing with communication networks was accomplished by Bavelas (1950). He organized groups of five people into communication networks which simulated different patterns of control. He illustrated communication patterns within different groups by using geometric representations of the communication links between people. Bavelas introduced the concept of centrality, where centrality is the extent to which one position in the network is close to all other positions. Bavelas hypothesized that networks with positions of high centrality were more effective in terms of task accomplishment.

Leavitt (1951) introduced the notion of individual member satisfaction in small group research. Leavitt found that different communication networks lead to differences in task accomplishment, leadership positions, and

individual member satisfaction. He concluded that the characteristic that was most closely correlated with differences in behavior was centrality. He states that where centrality is evenly distributed, there will be "no leader, many errors, high activity, slow organization and high satisfaction".

Guetzkow and Simon (1955) show that different communication networks have an effect on the ways in which groups can organize. Leavitt, Guetzkow and Simon gave different group networks different tasks and found that the type of network that was effective depended on the type of task introduced.

Another dependent variable, besides centrality, used in network research is satisfaction. Mulder (1959) discusses three hypotheses in relationship to the cause of satisfaction.

"A. Activity: just being occupied . . .

B. Self-realization: having responsibility for the completion of one's task

C. The exercise of power: determining the behavior of another person."

There is no empirical research directly testing the idea that activity leads to satisfaction; but attention has been given to the concept of power as it relates to satisfaction. Guetzkow and Simon (1955) conducted a study of motivation concerned with the exercise of power and self-realization. They found that the exercise of power, or determining the behavior of another, leads to satisfaction. They also found that self-realization, operationally defined as being restricted to completing one's own task, did not lead to satisfaction. This study, conducted within an organization, led them to conclude that there was higher satisfaction when a group member perceived himself as being of greater importance.

The consideration of psychological variables such as satisfaction, self-realization, and motivations have led us to the organizational concept of

climate. One of the first considerations of organizational climate was that of Douglas McGregor (1960) as he tried to identify several motivational bases underlying organizational theory. McGregor drew a distinction between two schools of thinking which he called Theory X and Theory Y, emphasizing different aspects of Maslow's (1954) hierarchy of needs.

Theory X, much like Weber's approach, emphasized standardization of rules and a hierarchical structure of authority. Theory X is based on the assumption that people, when given the opportunity, will not accept responsibility; therefore, they must be controlled and coerced into working toward organizational goals.

Theory Y, usually called a participative approach, emphasizes that people readily accept responsibility in an organization. Theory Y assumes that when an individual is allowed to become involved in an organization in a self-actualizing way, the organization will benefit. As each member self-actualizes, he becomes more creative in his approach to solving organizational problems, resulting in greater personal satisfaction and in greater productivity for the organization. Although McGregor prefers the Theory Y approach, he does specify some situations in which this approach would not be beneficial.

The concept of self-realization is directly related to decision making within the organization. James A. Lee (1971), in a summary and integration of the work of McGregor, Herzberg, Argyris, Likert, Maslow and others, sets forth the following philosophy of management:

> "Managers should trust their subordinates to be more responsible in the performance of their jobs; managers should permit the subordinate to participate in the making of his own job; managers should replace most of the mechanistic structure . . . with an organic approach to organization.' (Lee, 1971, pp. 21)

McGregor's conceptualization is only one of a number of ways of considering organizational climate, and a brief examination of these alternative conceptualizations seems appropriate.

Tagiuri (1965) provides a definition of climate within an educational setting. He describes climate as a relatively enduring quality of the internal environment of an organization that: (a) is experienced by its members, (b) influences their behavior, and (c) can be described in terms of the values of the organization. He defined an open climate as one in which there is attention to both task achievement and social needs.

According to Miles (1969) and Gallahen (1965) an open climate is a function of group norms which encourage task achievement and support various social needs, and these norms are much less supportive in a closed climate. They suggest that group norms are the factors which in turn promote innovativeness.

Gentry and Kenney (1967) suggest two primary norms that define the organizational climate in school systems: (a) the type of faculty interaction, and (b) the teacher perception of leader behavior.

A study by Davis (1969) examined the relationships between innovativeness of colleges and the degree to which the faculty participation is perceived as either recommended, obligatory or prohibited. He partially confirmed that norms relating to participation are perceived as recommended and permitted in a high innovative college, and as prohibited in a low innovative college. Thus, the climate, or group norm of participation is perceived more often as being permitted in high innovative colleges than in low innovative colleges, suggesting that a climate of participation is more common in high innovative than in low innovative schools.

Eibler (1965) showed a positive relationship between open climate and innovativeness in a study where he compared the school staff in the five most innovative schools in the Detroit Metro area with the five least innovative schools in the Detroit Metro area. Marcum (1969), and Johnson and Marcum (1969) did similar studies using innovative and non-innovative schools and found that there is a positive relationship between open climate and innovativeness in schools.

What then, are the important factors of an organizational climate which lead to this high degree of innovativeness? Rogers (1965) observed that the social characteristics of a school and the communication behaviors of school staff members are related to the innovativeness of the school system; and the literature on climate reflects this as more participative approaches are associated with open climates as has been previously discussed.

Aaron Lowin (1968), in his critique of research concerning participative decision making, offers the following definition and model for looking at participative decision making:

> "By participative decision making (PDM) we mean a mode of organizational operations in which decisions as to activities are arrived at by the very persons who are to execute those decisions. PDM is contrasted with the conventional hierarchical (HIER) mode of operations in which decision and action functions are segregated in the authority structure." (Lowin, 1968, pp. 69)

Lowin goes on to suggest that no organization can operate on a purely PDM model, nor can it always totally operate on a traditional hierarchical model. He states that the difference between the PDM and HIER decision making patterns are of degree rather than of kind.

Several studies involving organizational climate indicate that the primary determinant of climate is the leadership style employed. (Hemphill, 1969) and (Bowers 1969). In a study of organizational climate, Halpin (1966)

concluded that the principal of a school determines the organizational climate in an educational institution. Skogsberg (1950) suggests that the leadership pattern of the superintendent is the critical variable in determining the norms for participation and openness.

Johnson and others (1967) found a significant difference between the personality characteristics of superintendents in high and in low innovative schools. Those superintendents in the high innovative schools were more outgoing, venturesome and experimenting than superintendents in low innovative schools. As stated in the discussion of climate, the attitudes of the managers and leaders creates the organizational climate, and so you could expect the more venturesome and experimenting principals would work in organizational climates that were more innovative, as this study showed. Gross and others (1968) found that the administrator's willingness to accept new ideas can account for the innovativeness of a school district.

Another characteristic of innovative climates relates to the degree of external contact. Fullan and Eastabrook (1970) suggest that the greater the exchange between the school and its various environmental constituencies regarding the formulation of goals, the greater the degree of innovativeness. Eibler (1965) found that the faculties in the non-innovative schools had few contacts with other faculty and professional personnel. Klingenberg (1967) found that highly innovative schools relied on a greater number of information sources for new curriculum practices.

Montemuro (1970) found that administrators most likely to reject a project were those who received little or no information about it.

Another critical factor in determining the climate of an organization is the way in which decisions are made. This is a critical aspect of any

organizational climate, but especially so when considering the adoption of innovations.

Unlike much of the research on organizational decision-making, where decision making is an activity taking place at one point in time, we will regard decision making as a process, or series of events that are continuously going on. Berlo (1960) suggests that all communication should be regarded as a process, or an ongoing, changing, continuous series of events.

The process of decision making in an organization involves looking at a series of activities. Nan Lin (1968) suggests that the decision making process is a combination of the following stages:

1. "When the initiator of innovations considers alternative new practices or ideas"

2. "When the intermediate disseminators (or gatekeepers) make their choices among innovations legitimized by the initiators and transmit the selected parts, features, or information about the innovations to filter down to the receiving or adopting units"

3. "When the adopting units assess the values and assets of the innovations filtered down to them and decide to what extent they want to adopt or internalize the new ideas and practices." (1968, pp. 107-108)

Nan Lin concludes that "decision making is a very complex process which involves different strata of decision makers as well as different internal stages" (1968, pp. 108).

Another model of the decision making process is suggested by Beal (1964). We will use Beal's paradigm as a process-oriented model throughout the discussion of participative decision-making in this study. Beal's paradigm consists of the following five stages:

1. Stimulation of interest is the need for new ideas, by stimulators.

   STIMULATION can be described as the process by which involved participants become aware of an innovation and it becomes significant or important to other members.

2. Initiation of the new idea into the social system.

   INITIATION is the process by which an innovation receives increased attention.

3. Legitimation of the idea by power holders.

   LEGITIMATION is the process by which the innovation is approved or sanctioned by those who hold power, or represent the values and norms of the society.

4. Decision to act by members of the social system.

   DECISION is the process when the decision is formally acted on, and actually formalized as policy.

5. Action or execution of the new idea.

   ACTION is the process which includes the implementation or execution of an innovation.

This study will attempt to present a broad base for the decision making process, using the models presented by Lin and Beal as references for the various stages.

Most of the research in the area of decision making, such as McGregor's Theory X and Theory Y, has been characterized by its unidimensionality. That is organization's fall somewhere on a continuum from self actualizing to totally mechanistic and the point at which they fall characterizes their decision making process. Research shows that organizational climate, leadership style, and membership participation are highly complex phenomena and vary at different stages in the decision making process, yet dichotomous terms such as open or closed, autocratic or democratic, participative or non-participative are consistently used.

According to the process models presented, decision making cannot be characterized at one point in time, and cannot be characterized along one dimension. There are several approaches which provide a broader conceptualization of organizations, and it is important that we consider these as we look

at the relationship between decision making patterns, organizational climate, and the adoption of new practices and procedures within an organization.

Of the various perspectives, a systems approach with an emphasis on relationships among dynamic, interdependent elements is more conducive to fruitful communication analysis than are the dichotomous autocratic-democratic approaches. Developed by Bertalanffy and Miller, Buckley, Ackoff, Shannon and Weaver, a general systems view of organizations is concerned with relationships within an organization and also the relationships between an organization and its environment.

Katz and Kahn stress that an organization can be characterized as an open social system when it maintains itself through constant interchange with its environment. According to Katz and Kahn (1966), the following are important characteristics of an organization as an open system:

1. There is always energy input from the environment. No social system is self-sufficient.

2. The organization, as a system, transforms this energy, constituting work in the system. The reorganization of energy can be in the form of creating a new product, training or teaching people, processing materials, etc.

3. The system outputs some material, whether it be an inquiring mind or a package of cereal.

4. There is a cyclic chain of events in a system. There are many such cycles operating at the same time in a system. All of these cycles together can be said to represent the structure of an organization.

5. Systems acquire negative entropy. The principle of negative entropy is simply that all systems constantly move toward chaos and uncertainty, and only by importing more energy from its environment can an organization improve its survival status.

6. In the open systems, feedback helps to maintain a balance between a system and its environment. Feedback consists of signals to the system about the functioning of the system in relationship to its environment. It allows for the system to correct for its own malfunctioning.

7. Because a system is constantly receiving feedback about its relationship to its environment, and is constantly adjusting to this feedback, a system is dynamic and ever-changing.

Lewin (1947) was one of the first to study organizations from a systems perspective. He talked about a quasi-stationary equilibrium in an organization in which the organization attempts to maintain a certain "character." In order to maintain this character or equilibrium, an organization is constantly changing in relationship to the world around it.

Researchers who look at organizations as open systems, Katz and Kahn (1966); Miller (1960 and 1962); Platt and Miller (1969); Meier (1963); Guetzkow (1965); Likert (1967); Redding (1972); and Rogers (1973), to name a few, focus on several key issues that we have incorporated in this study.

Viewing an organization as an open system, researchers have concentrated on how information is transferred between an organization and its environment. Another focus for researchers who stress the systems approach is on the interdependency of the components of the system. Rogers (1973) states that the interdependency of all of the parts of the system implies an important function for organizational communication. This function is to facilitate the development and maintenance of desired inter-connections among elements within the system. Katz and Kahn (1966) stress that an open system approach will emphasize that an organization's change due to environmental influences is to be viewed as a healthy on-going process, not a malfunctioning of the organization.

Likert (1967) stressed that an organization should be viewed as a total system, and suggested a variety of concepts along which organizations vary, almost all of which are based on communication principles and variables. He suggested the following dimensions:

1. The degree to which superiors are receptive to information from subordinates;

2. the degree to which superiors listen to subordinates;

3. the degree to which organizational members are receptive to new ideas;

4. perceived degree of freedom to approach and communicate with one's superiors

5. degree to which members are informed about what is going on in the organization.

Along those dimensions, Likert categorized the following organizational systems: (I) Exploitive-authoritative, (II) Benevolent-authoritative, (III) Consultative, (IV) Participative-group. The results of Likert's research indicate that organizations which are more participative and receptive to new ideas such as System IV are more efficient than Systems I and II in terms of task accomplishment and are also more satisfying to individual members.

A systems approach to the diffusion of an educational innovation seems most appropriate because of the need for understanding the complex interdependencies existing between factors. This type of approach allows for input at different levels within the organization, and the relative effectiveness of those inputs at different points in time.

C. School System Variables Which May Affect Adoption of New Practices

As we look at the system within which the 10 reading programs being promoted by NIE/HEW are being introduced, one may note wide divergence of structures. Sizes of School Systems (districts) range from a few hundred students to over 100,000 students per district. This obviously will be associated with varying degrees of complexity of organizational structure

and with differing patterns of decision making. Both the literature on diffusion research (Rogers and Shoemaker, 1971) and that on organization research just cited, suggest the impact of organizational structure and decision making patterns on adoption of innovations.

Rogers and Shoemaker suggest that more authoritative patterns may result in quicker initial adoption, but less enduring use of practices introduced. Hawkins (1972) proposes that the level of participation in the decision process should be studied in at least two stages. The first stage he refers to as information seeking; the second stage he refers to as the implementation stage. He used first phase data from the present study to test hypotheses related to four combinations of high and low participation at each of these stages.

As he predicted, the lowest level of adoption was when the participation was low at both the information seeking and the implementation stages. Differences among the other three cells were not statistically significant but were in the predicted direction. He predicted that the more enduring use would be in those systems in which there was high participation at both stages in the decisions process. Hawkin's analysis has added another dimension to the usual view of participation in the decision process, one which offers possibilities for more fruitful analysis in relation to adoption of innovations.

The set of variables to be included under level of participation in the present study include: Who gets consulted when new practices are first considered? Who gets to vote on acceptance or rejection? What is the perception as to how autocratic or democratic the decision process is within the system? How often does the administrator carry out decisions of system

members?

As the complexity of the organizational structure increases, the flow of communication is more likely to go through more steps and the network through which messages flow becomes more complex. Potentially, this may impede the flow of messages and thus slow the process of decision making and adoption of new practices.

In this study, the set of variables considered under the heading of organizational complexity will include the number of links in the administrative hierarchy from the top administrator to the persons who would actually use the practice being proposed, the size of staff, number of students, number of administrators in relation to number of teachers, and the number of special program directors.

Rogers and Shoemaker, as well as others, have pointed out that in the early phases of the adoption process that cosmopolite sources may be more heavily used as information sources; while later in the adoption process, i.e., when the decision finally is being made to accept or reject, localite sources may be more heavily used. For the reading programs, a cosmopolite type of source would be the International Reading Association, universities, journals, and school systems at increasing distances from the person considering the practice. In the present study, those sources have been taken as subsets of a category labelled external contact.

Another variable related to adoption in the diffusion literature is the extent to which there is a norm for change and innovativeness within the system, referred to in this study as innovation proneness. This variable may be reflected in the way one ranks his system in relation to other systems in regard to earliness or lateness in accepting new practices generally. It

also may be reflected in the perceived receptivity or resistance to new practices among various units within the system--teachers, administrators, and school boards, for example.

Still another set of variables which relates to the rate and level of adoption are those pertaining to characteristics of the practices themselves. Rogers and Shoemaker cite work in this area under the headings of relative advantage, complexity of the practice, compatibility with existing practice, divisibility for trial, and observability of the results. Limited attention has been given to this set of variables in past diffusion research. It seems obvious that this set also could have a strong impact on decisions to adopt or reject regardless of communication efforts to gain acceptance.

The sixth set of variables to which attention will be directed in this study is exposure to messages regarding the practices. Among these will be the messages contained in a brochure mailed by HEW to all school districts in the USA; a set of booklets, each of which describes one of the 10 reading programs; demonstration centers where visitors could see the programs in operation; conferences; journal articles; and other mass media; and personal contacts.

D. Hypothesized Relationships

Given the sets of variables noted above, the findings of previous research, and the assumptions regarding the operation of the diffusion process, the following hypothesized relationships will be used to guide the data analysis:

1. Adoption of the new programs will be negatively related to organizational complexity.
2. Adoption of the new programs will be positively related to participation in the decision making process.

3. Adoption of the new programs will be positively related to level of external contact.

4. Adoption of the new programs will be positively related to innovation proneness.

5. Adoption of the new programs will be positively related to exposure to messages about the reading programs.

6. Adoption of the new programs will be:

   a. Positively related to perceived relative advantage of the practice;
   b. negatively related to perceived complexity of the practice;
   c. positively related to perceived divisibility of the practice for trial;
   d. positively related to perceived compatibility with present practice.

The data to be collected to test those hypothesized relationships and the methods of collection will be described in the next chapter.

CHAPTER II

Methodology

The study design employed factor analysis and difference statistics to determine change in level of adoption of the ten reading programs, and to identify relationships among selected variables and the level of adoption.

Telephone interviews were used to collect data from supervisors of reading programs in a sample of school districts in the USA. Variables covered in the data collection were: adoption level, decision making patterns, organizational complexity, innovation proneness, perceived characteristics of the reading programs being promoted, contact with information sources external to the school system, and exposure to messages about the reading programs.

A. Population and Samples

The population for the study was 18,600 school districts on a mailing list presumed to cover all school districts in the USA. A subpopulation within that population was a set of school districts from which requests had been received for booklets describing one or more of the ten reading programs. Most of those 1,455 requests came on order forms contained in a brochure describing the programs, but a few came in letters or on postcards.

Two panel-type samples were drawn, one from the subpopulation which had requested booklets (referred to as "brochure sample"), and one from the remaining schools in the total population of schools (referred to as "district sample"). A sample of 100 school districts was selected from the subpopulation requesting the booklets. This was done by arraying the requests in the order

in which they were received, then picking a random starting point and selecting every nth request so as to get a sample of 100.

The subpopulation of school districts which had not requested booklets was divided into four strata of school size and a random starting point selected from which every nth school district was selected so as to obtain a random sample of 50 school districts from each of the four strata. School districts within each of the strata were arrayed alphabetically for this sampling procedure.

Data were collected from these two panel-type samples four times at intervals of two to three months beginning in April of 1972 and ending in May of 1973.

The following chart shows the strata by school size with the number and percentage of districts for each size category and the estimates of the number of pupils for each size category. Actual numbers of pupils by size categories were not available from USOE at the time of sampling so the number of pupils was estimated by taking the category median and multiplying it by the number of districts, except for the 182 largest school districts. For that group of 182, the estimates for all the other categories were subtracted from the total number of pupils listed in the USOE data.

School Size Categories Grouped by Strata
Used for Sampling

Stratum No.	Categories of School Size	Districts		Pupils	
	No. of Pupils	No.	%	No.	%
I	0 - 299	7,089	37.59	1,063,350	2.32
	300 - 599	2,483	13.16	1,117,350	2.43
II	600 - 999	1,965	10.42	1,572,000	3.42
	1,000 - 2,499	3,477	18.44	6,085,750	13.25
III	2,500 - 4,999	2,025	10.74	7,594,750	16.54
	5,000 - 8,999	1,096	5.81	8,220,000	17.90
IV	10,000 - 24,999	542	2.87	9,485,000	20.66
	25,000 - 999,999	182	.96	10,767,000	23.45
		18,859	99.99	45,905,200	99.97

To provide a check on the effect on adoption which might be attributed to repeated interviewing, other random samples were drawn to serve as control groups. Three sets of these were drawn from each of the two subpopulations. For the "district control samples", 67 school districts were drawn from that remaining "district" subpopulation for each of the last three data collections; for the "brochure control samples", 50 school districts were drawn from those remaining in the "brochure" subpopulation for each of the last three data collections.

Use of the subpopulation of school systems which had requested booklets insured getting a subset of respondents who were aware of the programs.

School systems which were eliminated from the samples due to refusal, inability to contact, or any other reason were replaced by using a randomly selected starting point in the list of schools for the appropriate subpopulation and selecting every nth school from the list.

The following list shows the dates and sample sizes for each data collection phase:

Dates and Samples For Each Data Collection Phase

Data Collection Phase	Time	Samples Interviewed
#1	April 2 to May 12, 1972	District Panel of 200 Brochure Panel of 100
#2	Sept. 25 to Oct. 27, 1972	District Panel of 200 Brochure Panel of 100
		District Control #1 of 67 Brochure Control #1 of 50
#3	Jan. 15 to Feb. 9, 1973	District Panel of 200 Brochure Panel of 100
		District Control #2 of 67 Brochure Control #2 of 50
#4	April 9 to May 18, 1973	District Panel of 200 Brochure Panel of 100
		District Control #3 of 67 Brochure Control #3 of 50

B. Data Collection

1. The Instruments

The basic data collection instrument was a 64-item interview schedule. (See Appendix A-1.) Questions were constructed to provide measures of level of adoption and of the six sets of variables presumed to reflect factors related to adoption levels. Those six sets are:

1. Organizational complexity
2. Decision making patterns
3. External contacts (with information sources)

4. Innovation proneness

5. Characteristics of practices

6. Exposure to messages about the reading programs

For the second and third phase data collection, the measures on adoption level and the questions tapping exposure to messages about the reading programs were the only data collected from the panel samples. The full 64-item interview schedule was used in collecting data from all of the control samples.

The full set of questions was asked of both panel and control samples in the fourth phase data collection. For the panel samples a validation check of first phase interviewing and coding was included. This was accomplished by preparing a computer printout of each respondent's first phase replies to the questions and the coding of those replies. One copy of this printout was sent to the respondent and one was kept for the telephone interviewer to use.

During the interview, panel respondents were asked to check the responses recorded on the printout and indicate: (a) whether the response was correct for the present time; (b) if not correct, whether there had been a change since the first phase interview or had there been an error in recording or coding the response. The interviewer noted on his copy of the printout whether the response was still accurate; whether it had changed, or was in error; and noted the correct current response.

A set of open-ended probe questions (Appendix A-2) was used as a means of obtaining as much data as possible on sources used by respondents to get messages about the reading programs and the content of those messages.

A feedback form (Appendix A-3) was used to get reactions from a small

number of persons who visited the demonstration center at Indianapolis, Indiana; or the one at Topeka, Kansas.

A limited pretest of the instruments was conducted among coordinators of reading programs in four school districts in the Lansing, Michigan area. This was basically to determine the ability of these persons to provide the information being requested and to determine the time required to complete the schedule.

2. The Procedures

A copy of the interview schedule with a covering letter, was mailed to the superintendent of each school district in the samples. The superintendent was instructed to forward the instrument to the person charged with supervision of reading programs in that district. In the case of no specified reading coordinator, the person most qualified to answer was to be contacted. Each respondent was notified in a letter included with the questionnaire that he would be contacted by telephone in order to elicit his responses.

Telephone interviews were used for several reasons:

1. It allowed for two-way communication in the interview situation, and probing for additional details.

2. With a sample as widespread as this population, it would have been very difficult and costly to conduct field surveys.

3. Mail surveys would likely produce a low percentage of responses which would limit data analysis and generalizations.

4. With the complex organization of some school systems, the telephone contact helped insure that the most appropriate person in the school system was contacted to respond to the questionnaire. WATS line service allowed repeated calls at low cost to establish contact

Interviews were conducted by Michigan State University students, under the supervision of Dr. Lawrence E. Sarbaugh, project director. A training session for all interviewers was conducted prior to each data collection

phase. Each interviewer was given a training manual (Appendix B) and monitored throughout the data collection. All interviews were checked at the end of each day, and in the event of missing data, the subject was called again, and the missing data obtained. To avoid the effects of fatigue, each interviewer was scheduled for no longer than two to three hours per day.

The most time consuming part of the interviewing was locating the appropriate respondent in the school system and scheduling a time when he or she would be available for the interview. Once this was accomplished, sample members were generally very cooperative. In fact, it was not unusual for the interviewer to find that it was difficult to terminate the interview because the respondent wanted to continue talking about reading programs in his school.

The feedback forms for the demonstration centers were mailed to the person in charge of the demonstration center with a return envelope for each person completing a form. The respondent completed the feedback form, sealed it in the envelope and it was then mailed to the project office at Michigan State University.

C. Coding

Each person assisting with coding was assigned specific questions for ease of training and to insure higher consistency where interpretations of responses were required. Two or more coders worked with each set of questions and spot checks were made by one coder against another as a check for possible coding errors. Where discrepancies were found, the work of a coder would be completely reviewed or the coding for a question across all samples would be reviewed if the error were on only one question.

At the completion of coding for each data phase, the person supervising coding selected a random set of questionnaires and checked the accuracy of the coding. Where errors appeared on the coding of a question, the coding of that question was reviewed on all questionnaires.

D. Index Development

In the development of this study it was decided that no single measure was adequate to tap the major variables presumed to be related to adoption of new practices within an organization such as a school district. Thus several items were developed which, when combined, would presumably provide a composite measure for variables such as organizational complexity, participation in decision making, and external contact.

In addition, a set of numerical values was needed to permit easier comparisons on adoption level among the various subsamples, and within subsamples at different points in time. A scale was desired which would make visible the number of stages through which a person or group had moved by the time of data collection, one which would give the highest value for the person or group who had moved from no awareness of the program to implementing a decision to adopt or reject the program, and one which would give the lowest value for respondents who were not even aware of the program.

Rejection was considered as legitimate an act as use of a program, under the assumption that a rational decision, consciously made, could include a decision that a program is not appropriate for use in a given situation. At the descriptive level of analysis, the number of adoptions and rejections will be noted, so that a more definitive interpretation of the final adoption stage is possible.

1. An Adoption Scale

The adoption scale developed here builds on the five basic adoption stages used in prior diffusion research. It has added rejection as an acceptable final step. It will be noted in the composite scale that the values assigned increase with an increase in the number of stages through which the person or group has passed. It also should be noted that stages 2 and 4 are not considered necessary in a sequence of stages, while stages 1, 3 and 5 are considered necessary in a sequence that has reached the point of implementation of a decision.

The basic stages used in building the scale are as follows:

1. Aware of one or more of the programs;
2. Sought information about one or more of the programs.
3. Considered using one or more of the programs, i.e., does this program seem appropriate for my school, would it be better than what is now being used, etc.;
4. Tried one or more of the programs or some part of one or more of the programs;
5. Had decided to adopt (either completely or partially) or to reject one of the programs; and had implemented that decision.

The composite scale is as follows:

Value Assigned	Adoption Stages Included
0	No action
1	Adoption stage 1 (aware)
2	Adoption stages 1 and 2
3	Adoption stages 1 and 3
4	Adoption stages 1, 2 and 3
5	Adoption stages 1, 3 and 4; or 1, 3 and 5; or 1, 2, 3 and 4
6	Adoption stages 1, 2, 3 and 5; or 1, 3, 4 and 5; or 1, 2, 3, 4 and 5

2. Participation in Decision Making

As noted in the review of literature, decision making has been studied within organizations under a number of dichotomous labels: autocratic vs. democratic; open climate vs. closed climate; Theory X vs. Theory Y, etc. These all encompass the notion of level of participation in decision making by the members of the organization.

Two types of measures of participation in decision making have been included in this study. One measure uses the labels autocratic-democratic and asks for the respondent's perception of how autocratic or democratic he believes the decision making process is within his school system.

The second measure, more systems oriented, involves a set of questions which ask for specific behaviors which have face validity as indicators of the level of participation in the decision making process. Four of these are contained in questions 11, 12, 13 and 14 in the questionnaire (Appendix A-1).

The points covered in relation to participation in decisions regarding the introduction of new practices are as follows:

1. Who gets consulted?

   a. All the faculty
   b. All affected faculty
   c. Some group of the affected faculty
   d. Some group of the total faculty, such as a curriculum committee
   e. Some individual within the faculty
   f. No one

2. Who votes on the decision? The same set of options was employed in the coding scheme, except that "some individual votes" was considered a null set and not included.

3. Who makes the final decision on adoption or non-adoption of a new program?

   a. Consensus of teachers and administrators

b. Curriculum committee
c. Administrative group or superintendent of instruction
d. Curriculum director
e. Superintendent
f. School Board

4. Who may request that a new program be considered?

a. Any teacher
b. Tenured teachers
c. Someone in the department
d. Curriculum committee
e. Principal
f. Superintendent

An item factor analysis using data from the district panel sample in the first phase data collection confirmed that these items fit together on a common dimension. Some other items also had primary loadings on the same factor. The main ones were the items on receptivity or resistance to change among administrators, school board members, and teachers within the school system. That is not surprising in view of work reported in the literature review regarding the positive relationship between climate and leadership style and between leadership style and innovativeness. Innovativeness presumably is reflected in receptivity to change. Likert, for example, pointed to receptivity of members to new ideas and receptivity of superiors to information from subordinates as two of the key variables to consider in studying decision making within an organization.

In the final data analysis, the items on consulting and voting were combined into a 5-point scale. This was done to provide a greater range of levels of participation, and to recognize that participation may be high or low throughout the decision process; or that participation may be high at one stage and low at another.

The scale was derived by taking the 30 possible combinations from the

two sets of responses. For example, "all faculty are consulted" and "all faculty vote" would be considered the highest level of participation; and "no one is consulted" and "no one votes" would be considered the lowest level of participation.

The 30 possible combinations were put on cards and given to five persons to rank order from highest to lowest level of participation. Those doing the ranking were instructed to put the combinations into a 4-6-10-6-4 distribution. There was unanimous agreement on the four combinations at each end of the scale; and nearly unanimous agreement at the other three levels.

The summated values from the forced distributions into which the 30 combinations were sorted produced distinct break points, but not exactly 4-6-10-6-4 distribution. It was a 5-6-9-6-4 distribution and that was used for the values in this study. The combinations for each of the scale values were as follows:

No one is consulted; no one votes Some group of the teaching staff is consulted; no one votes No one is consulted; some group of teachers vote Some individual is consulted; no one votes Some group of the affected teachers are consulted; no one votes	1
No one is consulted; some group of affected teachers votes Some individual is consulted; some group of the teaching staff votes All affected teachers are consulted; no one votes No one is consulted; all affected teachers vote Some individual is consulted; some affected teachers vote All teachers are consulted; no one votes	2

Polling was not used in the scale for two reasons: (1) it would have increased the number of possible combinations to 150, a set which would have been very difficult to handle; and (2) consulting had a higher correlation with polling than either had with voting (0.51 vs. 0.25 and 0.16).

No one is consulted; all teachers vote	
Some group of the teaching staff is consulted; some group votes	
Some group of affected faculty is consulted; some group of the teaching staff votes	
Some group of affected teachers is consulted; some group of affected teachers votes	
Some individual is consulted; all affected teachers vote	
Some individual is consulted; all teachers vote	3
Some group of the teaching staff is consulted; some group of affected teachers votes	
All affected teachers are consulted; some affected teachers vote	
All affected teachers are consulted; some of the teaching staff vote	
All teachers are consulted; some group of teaching staff votes	
All teachers are consulted; some group of affected teachers votes	
Some group of affected faculty consulted; all affected teachers vote	
Some group of the teaching staff is consulted; all affected teachers vote	4
Some group of the teaching staff is consulted; all teachers vote	
All affected teachers are consulted; all affected teachers vote	
Some group within the affected faculty is consulted; all teachers vote	
All teachers are consulted; all affected teachers vote	5
All affected teachers are consulted; all teachers vote	
All teachers are consulted; all teachers vote	

By using the combinations shown above as well as the individual items in the analysis, it is possible to check the relation between some generalized notion of level of participation and adoption, as well as, the relation between adoption and level of participation at the consulting and voting stages of decision making.

3. External Contact

The external contact measures are intended to reflect the extent to which a respondent indicates that he and his colleagues seek new reference relations.

A number of studies, Merton (1957), Rogers (1971) and Waisanen (1969), for example, point to contacts outside the system as positively related to innovativeness and modernization. With that in mind, four measures were combined into a measure of external contact for this study. These were:

a. The ease and frequency of contact with university staff members;

b. Frequency of attendance at reading conferences;

c. A ratio of the number of IRA (International Reading Association) members to total reading teachers in a school district.

d. Frequency of contact with staff members in schools that are more than 100 miles away, those 15-100 miles away, and those less than 15 miles away.

A factor analysis of first phase data from the "district panel" sample showed "frequency of university contact" loading with "frequency of contact with staff in other school systems". The other two items did not have primary loadings on that same factor. Since the four items did not clearly load on the same factor, the data from each item, as well as that from the composite measure, were used in the analysis. As with the level of participation in decision making, it is hoped that use of both composite and separate measures may give more insight into the relationship of this set of variables with adoption of new practices.

The values for the composite external contact measure were computed as follows:

a. University contact (ease x frequency)

Ease	Frequency
Very convenient (1)*	One or more times a week (5)*
Somewhat convenient (2)*	One to three times a month (4)*
Somewhat inconvenient (3)*	Six to eleven times a year (3)*
Very inconvenient (4)*	One to five times a year (2)*
	Less than once a year (1)*

The maximum possible value was 20

The ease of university contact was multiplied by the frequency of contact with a university staff member regarding reading programs. The

*These are the values assigned to each of the responses and used in computing the composite scale.

values for ease ranged from 1 for very convenient to 4 for very difficult; and from 5 for one or more times a week to 1 for less than once a year. The combinations of those two measures provide a range of values from 1 to 20. This assumes that greater effort and committment are required to contact a university staff member when it is inconvenient than when such contacts are convenient.

b. Frequency of attendance at reading conferences and other professional meetings within the past 12 months by staff of a school system was considered another potential source of new inputs into programs. It may be that the item should have specified state, national or regional conferences and meetings so as to isolate contacts external to the system. That possibility is suggested by the factor analysis which shows this item loading with the factor on level of participation. It seems highly probable that the reported attendance at reading conferences and professional meetings may have included a high proportion of "within system" conferences.

The frequency categories and the values used for each were as follows:

No. of Reading Conferences and Professional Meetings Attended	Value Assigned
None	0
One	1
Two to three	2
Four to five	3
More than five	4

Those values were multiplied by two to give more weight to this type of contact in computing the final score. The relationship of this item to other contact measures will be studied further in the final data analysis. The values for this item ranged 0 to 8.

c. The ratio of teachers in IRA to all teachers working with reading programs within a school system also was taken as an indicator of the extent to which the school system is seeking new inputs from outside the system. The ratio was used in an attempt to equalize the differences in numbers for different size schools; e.g., one IRA member from a reading staff of 10 would be considered equivalent to 10 IRA members from a reading staff of 100.

The ratios were expressed as decimals and the values used for analysis were assigned for units of 0.15, i.e., 0.00 - 0.15 was given a value of 1; 0.16 - 0.30, a value of 2; and so on to 0.91 - 1.00 with a value of 7. If this measure were to be used in another study, more clearly defined boundaries are needed for the category of "teachers working directly with reading programs". One approach would be to determine how many teachers have reading improvement as their sole responsibility; how many spend half to full time working on reading; and how many spend less than half-time. Even those categories may not be precise enough to provide a meaningful ratio with high consistency among school systems.

d. The measures of contact with staff in other school systems take into account both frequency and ease of contact. Values for contacts with school systems more than 100 miles away were multiplied by 5; by 3 for those 15-100 miles away; and by 1 for those less than 15 miles away. The frequency values were the same as those used for university contacts, ranging from 1 for contacts of less than once a year to 4 for contacts of one or more times a week. The maximum summated value for these measures was 36.

The maximum possible value for the four sets of measures of external

contact was 71; the minimum was 11.

4. Organizational Complexity

Organizational complexity is an aspect of organizational structure which is presumed to affect communication within the organization. In a systems view of decision making and innovation, the structure of the organization will set some limits on the decisions and overt action which may occur; and it will be a factor in determining which decisions and actions are most probable. The challenge is to identify the aspects of structure which are most strongly related to outcomes.

Complexity of organization was selected as one of the sets of variables because it is believed that this set would be most closely related to communication flow within the organization. From that perspective, size is a variable that is related to complexity of structure. It may be measured in terms of number of pupils, number of teachers, and number of administrators. As size increases, the complexity of structure increases, and it is expected that there will be an attendant increase in the number of linkages from the teacher working with pupils to the top administrator.

Another factor affecting communication flow is what is commonly labelled span of control. It was with that in mind that the measures were included on number of assistant administrators reporting to the top administrator and the number of building principals. One difficulty with trying to assess the impact of these various aspects of structure on communication flow is that as span of control is reduced it tends to increase the number of layers, hence the number of communication linkages from top to bottom of the structure. On the other hand, to reduce the number of linkages, one increases the span of control which would increase the number of persons with whom a super-

visor is expected to interact at rather intense levels.

As noted in the literature review, one way out of this dilemma may be to keep the system as open as possible so as to minimize the hierarchical rigidity; and to seek some optimum balance between span of control and number of links from the top administrator to the mass of employees. The open system injects more uncertainty and may be discomforting for some employees who prefer a more rigidly prescriptive system.

The factor analysis of first phase data yielded a stable factor containing variables pertaining to organizational structure. These included number of pupils, number of teachers, number of building principals, number of administrators, number of special program directors, and number of administrative links in the system.

It is obvious that the size measures do not reveal structure in the sense of the interrelationship among elements within the system. It is assumed that these size measures are correlates of complexity of structure and may be useful as predictors of adoption of new ideas.

To get at complexity of structure in a more fruitful way, in order to plan communication strategies, would require a network analysis within typologies of systems. From such studies one could determine the most probable patterns of communication flow within the system and the most probable linkages with other systems. It is the linkages with external systems which offer the most opportunity for introduction of new ideas and practice; the implementation would then focus more on the communication flow within the system.

While the size measures and number of links will be used individually in the analysis, a composite measure was constructed and also will be used in the analysis. The composite measure consists of six items. These are:

a. Span of control as defined by number of assistant and associate administrators reporting directly to the top administrator. The values ranged from 0 to 8, where 0 to 7 were the actual number of assistant administrators and 8 was for 8 or more of them in a system.

b. Special program directors were given values on the same basis as the assistant administrators.

c. Number of building principals was assigned a value corresponding to the actual number of such persons up to 89; 90 was assigned for school systems having 90 or more building principals.

d. Number of levels from top to bottom of the structure was obtained by asking a respondent to state how many administrative links there were from his position to the top administrator, and how many links from his position to the teachers who actually teach reading to pupils. Actual number of links reported was used as the value for these items up to 7; and the value of 7 was used for 7 or more links.

e. Number of pupils, as one would expect, correlates strongly with number of teachers, thus either measure would give an indication of size of school system. However, number of pupils was used in the composite measure as a somewhat more accurate indicator of the size of the system, since there is some variability in teacher-student and administrator-teacher-student ratios.

Two composite measures were computed, one including the number of assistant administrators as a measure of span of control; and one excluding the number of assistant administrators. This was an attempt to give more insight into the problem mentioned above in relation to varying span of control as it pertains to complexity of communication flow.

A complicating factor in relating the size variables to adoption in the present study is that a number of the programs being studied are more feasible for adoption in larger systems due to the staffing and other resources required. So, if size were negatively related to communication, that relationship might be offset with the characteristics of the programs included in the present study.

5. Innovation Proneness

A variable presumed to influence the acceptance or rejection of new

practices is the attitude and values toward change and the composite pattern for or against change which may develop within an organization. In this study, the tendency to favor innovation has been labelled innovation proneness.

Several questions were included to tap that variable. Among these were questions 45, 49, 51 and 52. Those items loaded together on the factor analysis computed on first phase data. Three other items correlated highly with each other, and at a moderate level with the above four items. The first four items ask how the respondent's school system compared with others in the State as to quality of reading programs, quality of teaching program, how innovative, and whether the school system was among the first or last to try new reading programs. The other three items ask respondents to rate the teachers, administrators and school board in their school system on receptivity or resistance to change. As noted earlier (pp. 32), these last three items loaded with the items on level of participation in decision making.

No composite measure was developed from the items on innovation proneness. They were used individually in the analyses which were run.

6. Exposure to Messages About Reading Programs

Exposure to messages about reading programs comprised another set of variables in the present study. These variables dealt with sources of messages and general content of messages, and were handled descriptively. Comparisons were made of the kinds of sources and content sought at different stages in the adoption process.

The limited number of respondents who moved through the final stages of the adoption process restricted the amount of data available on exposure

to messages. In addition, the difficulty respondents reported in recalling the sources and kinds of information also limited the amount of data that could be obtained, even at the earlier stages in the adoption process. Even so, these measures provide data which supplement the measures of external contact discussed earlier in this report.

E. Data Analysis

The aim of the data analysis is to identify relationships among selected variables, and adoption level so that more efficient communication strategies can be developed and used in introducing new programs into school systems.

That overall and long-range aim requires that the level of adoption of the programs be determined. It is recognized that the adoption process occurs over time, so change in adoption levels over the period of one year will be determined. It also is recognized that reinterviewing may have a sensitizing effect and in itself may contribute to increase in adoption of the programs. To determine the extent of that influence, comparisons between the panel-type samples and control samples will be made at three points in time. Typologies of schools will be identified via factor analysis techniques so as to study which variables are most useful in discriminating between high and low adoption level school systems.

1. Typologies of School Systems

Typologies of school systems will be determined for five sample sets of schools using fourth phase data. The five sample sets will be district panel (large schools), district panel (small schools), district control. brochure panel, and brochure control.

Forty-two questionnaire items and composite measures with equal-appearing

interval measures were used in the factor analysis to produce the typologies of schools. These included the items that went into construction of the composite measures reported in the preceding section -- the composite measures on adoption level, organizational complexity, level of participation in decision making, and external contact. The following are the measures* used in this analysis:

1. About how much of your time are you able to devote to your duties with the reading program? (3)
2. Number of assistant administrators reporting directly to top administrator. (5)
3. How many building principals are there in your school system? (7)
4. How many special program directors are there in your school system? (8)
5. Number of administration links up to the top administrator. (10)
6. In your position with respect to the reading program, how many different links are there between you and persons that actually teach reading to the students? (10)
7. How often does the administrator of your school system carry out the action recommended by a vote of the teachers? (15a)
8. Considering the decision process in your school system, would you say the process is: (a) very autocratic, (b) somewhat autocratic, (c) somewhat democratic, or (d) very democratic? (15b)
9. How many pupils do you have enrolled in your school system? (17)
10. What is the per pupil expenditure for operating your school system? (19)
11. Percent of teachers with less than BA?
12. Percent of teachers with BA?
13. Percent of teachers with MA?
14. Percent of teachers with Ph.D.?
15. Percent of administrators with less than BA?

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*Numbers in parentheses are the numbers of questionnaire items in Appendix A-1.

16. Percent of administrators with BA?

17. Percent of administrators with MA?

18. Percent of administrators with Ph.D.?

19. Total number of teachers? (20)

20. How frequently does someone from your reading staff (including yourself) contact a university staff member? (22)

21. How many teachers and other administrators in your school system are members of IRA including yourself? (25)

22. How many different reading conferences and/or professional meetings have been attended by you or someone of your reading staff within the last 12 months? (26)

23. Within the last year, did you receive a brochure from the National Center for Educational Communication/USOE entitled, "Model Programs in Reading" listing ten reading improvement programs from across the nation? (27)

24. Ratio of administrators/teachers?

25. Level of participation in decision making -- combinations of participation in consulting and voting? (See Question 11 & 12.) (Use first response on Question 11 and answer to Question 12 to get alphabetic combination.)

26. Adoption level?

27. When it comes to trying new reading programs, my school tends to be: "among the first" . . . "among the last". (45)

28. School board's receptivity to change? (46)

29. Teaching staff's receptivity to change? (47)

30. Administrator's receptivity to change? (48)

31. Rank of school system on innovativeness? (49)

32. Rank of school system on quality of reading program? (51)

33. Rank of school and quality of teaching? (52)

34. Frequency of communication about reading programs between the reading staff of your school system and the reading staff of school systems that are more than 100 miles away? (55)

35. Frequency of communication about reading programs between the reading staff of your school system and the reading staff of school systems that are more than 15 miles, but less than 100 miles away? (56)

36. Frequency of communication about reading programs between the reading staff of your school system and the reading staff of school systems that are less than 15 miles away? (57)

37. Number of years experience in teaching?

38. In deciding whether or not to use any of these programs, did you seek out any other person(s) in order to discuss the program?

39. Did other persons seek you out to discuss any of these programs they were considering using?

40. Computed external contact score.

41. Computed organizational complexity score (including column 14).

42. Computed organizational complexity score (excluding column 14).

Since the computer capacity was limited to a 100 x 100 matrix, only 100 schools could be included in each analysis. This required that the district panel sample be divided in half. That was done by taking the subjects from the samples of small schools (less than 2,500 pupils) as one sample set and the subjects from the sample of large schools (2,500 or more pupils) as the second sample set. For the other three subsamples, the intact sets were used for the factor analysis.

The four to six school systems with the highest factor loadings on each factor were selected as most representative of that type of school system. Using these sets of four to six school systems as representative of each of

the factors in a subsample, the data were submitted to a special analysis (WRAP computer program) which weights the raw item scores in proportion to the magnitude of the factor loading, sums these weighted values across the school systems taken as representative of the factor, and then converts the weighted scores to standard scores.

The standard scores provide the basis for identifying which of the 42 measures discriminate among the factors (typologies of school systems) and which are consensual across the typologies of school systems. The weighting for the raw scores for each subject (school system) is obtained by the formula $\frac{r}{1-r^2}$ or $\frac{\text{loading}}{1-\text{loading}^2}$.

In comparing Factor one (F_1) with Factor two (F_2), the standard scores on F_2 are subtracted from those on F_1. When the magnitude of the difference for a variable, is 1.000 or greater (either plus or minus) that variable is taken as one which discriminates between the two factors. Those variables where the differences are less than 1.000 will be considered consensual items.

Given the school systems which are determined to be representative of a typology, the responses on questions regarding communication behavior and other characteristics can be compared for Type I school systems, Type II school systems, etc. In this way data from the nominal level of measurement can be viewed, too.

Identifying types of school systems; then identifying the characteristics unique to each type of system can provide a basis for suggesting communication strategies unique to each type of system. Hopefully, that will increase communication efficiency and facilitate the introduction and adoption of new programs.

2. Elementary Linkage Analysis* and Item Factor Analysis

Elementary linkage analysis and item factor analysis were used to determine whether the items presumed to be measuring variables in the same set actually fit together. Fifty items were used in the correlation matrix. These included the items covered in the discussion of composite measures, plus the composite measures, the adoption scale, and some selected items on exposure to sources of messages regarding reading programs. The elementary linkage was performed on fourth phase data for the district panel and brochure panel samples.

The factor analysis employed a principal axis solution and varimax rotation with a criterion to stop rotation when the last factor extracted had only three variables with primary loadings on that factor. The item-factor analysis was on first phase data with the district panel sample.

In calculating Pearson Product Moment Correlations, and performing factor analysis, interval data are assumed. It cannot be claimed that all the measures included in the 50 x 50 matrix are interval, but the writings of Vroom (1960) and others provide precedent for treating Likert-type scales as if they were interval scales:

> To the extent that we can reasonably assume random variation from linearity in perception, so we may choose to treat scales with equal-appearing intervals as if they were in fact interval measures. Caution, however, must be taken against too strict an interpretation of the precise magnitude of the correlations. In this case, we were not interested in determining the significance of the inter-item correlations, but rather in identifying the underlying dimensions (factors) that distinguished different groups of items.

The inter-correlation matrix and the factor analysis helped in selecting variables used in a multiple correlation and Least Squares delete program.

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*McQuitty, Louis: "Elementary Linkage Analysis", Educ. Psychol. Measurement, 17: 207-29, 1957.

3. Differences in Adoption Levels

Differences in adoption levels were computed among the various subsamples and among the four data collection phases; t-tests, rather than analysis of variance, were used to test the significance of the difference since there were unequal numbers of respondents in the various subsamples. The comparisons were among the mean adoption scores for the district panel, district control, brochure panel, and brochure control samples and for the four times of data collection.

It was necessary to determine whether the panel samples changed over time in ways which were different than the changes in the control samples over time.

If it is found that the district panel sample does not differ significantly from the district control on adoption level; and if further checking reveals that the relevant characteristics of the two samples sets -- panel and control -- do not differ significantly, the detailed data analysis will focus on the district panel sample. If significant differences are found, detailed analyses will include control as well as panel samples.

4. Chi Squares

Chi Squares were computed between the composite measure of adoption and 70 of the variables which were assumed might be related to adoption. That was done for each of the four types of samples -- District Panel, District Control, Brochure Panel and Brochure Control. That analysis was used as a check against the relationships identified by the correlations and t-tests since the data on several of the variables did not meet all of the assumptions for t-test and correlations, as well as for some variables not included in the correlation analyses.

Another set of Chi Squares was run to determine whether the four types of samples varied on several of the variables. These encompassed the variables dealing with participation in decision making, contact with information sources external to the school system, innovativeness and receptivity to change, percentage of time devoted to reading programs by the respondents, awareness of demonstration centers, and writing for booklets describing the programs.

Data from several of the variables which did not yield statistically significant relationships with adoption level were not included in this report. Among these were the age of the respondents, the different jobs they had held, years of teaching experience, etc.

The computer program for Chi Square also provides frequency counts on the variables included in the analysis. That provided some of the data for the descriptive analyses.

5. Frequencies and Percentages

Frequencies and percentages only were computed for the variables which were not used in the Chi Square, or in the correlation and factor analyses. Among this "frequency only" set were the responses to the questions on stage of adoption for each of the ten programs; and the responses to questions on relative advantage, complexity, compatibility, and ease of trial for each of the ten programs. Other items included those giving sources of information used, the kinds of information sought, the reasons for considering a particular program, and the job title of the person who first suggested that a program should be considered for adoption.

Frequencies for other variables used in descriptive statements were obtained from the computer printouts from the other analyses which were run.

6. Multiple Correlation and Least Squares Delete Analyses

Multiple correlation and least squares delete analyses were run using adoption level as the criterion variable and the following as predictor variables:

1. Composite measure of external contact;
2. Corposite measure of organizational complexity;
3. Percent of time respondent (coordinator of reading programs) devotes to duties with reading program;
4. Number of pupils;
5. Level of participation in decision making;
6. IRH/Reading teachers;
7. Seek others for information;
8. Frequency of contact with other schools 15-100 miles;
9. Rank of school on quality of reading program;
10. Rank of school on trying new reading program;
11. Rank of school on innovativeness;
12. Teachers' receptivity to change;
13. Administration's receptivity to change;
14. School Board's receptivity to change;
15. Knew about demonstration centers;
16. Wrote for leaflet;
17. How often administration carries out vote of teachers;
18. How auto-democratic is decision process;
19. Number of links between reading teacher and top administrator;
20. Percent of teachers with M.A.;
21. Percent of administrators with Ph.D.;
22. Number of reading conferences attended in past twelve months;

23. Number of assistant and associate administrators;

24. Convenience to University;

25. Frequency of contact with University.

This analysis is useful when it is believed that several variables, which alone show weak relationship, may have an additive effect and taken together show a much stronger relationship with the criterion variable. Using the Least Squares delete analysis, it is possible to identify those variables which are contributing most to the relationship.

CHAPTER III

Findings

A. Plan for Chapter

The first set of findings to be presented will be those dealing with a comparison of the various sample sets on the adoption measure and other selected measures. This will give a basis for selecting certain of the sample sets and phases of data collection for more detailed analyses. With nearly 450,000 pieces of data, it is important that the analyses carefully synthesize the data to reflect the main focus of the findings without omitting critical aspects, and at the same time avoiding such a voluminous presentation as to be overly formidable for the reader.

The second main division of this chapter will present the relationships between adoption level and other variables as extracted through the multiple correlation and regression analysis provided by a Least Squares Delete program.

A third aspect of the analysis is the factor analysis which yielded typologies of school systems and the aspect of that analysis which identified the variables which discriminated between the typologies. The adoption levels of the school systems which emerged as most representative of the typologies also will be determined to check the relationships between the discriminating variables and the level of adoption.

In the fourth section of this chapter, a resume of the Elementary Linkage Analysis for the District Panel and Brochure Panel samples will be presented. The Linkage diagrams are presented in Appendix C.

The fifth section will focus on descriptive findings for the four types of samples -- Brochure Panel, Brochure Control, District Panel, and District

Control. This section also will contain that part of the findings dealing with the relation of information sources to adoption stages.

B. Comparison of Sample Sets on Adoption and Other Selected Measures

Two things made the data collection and analysis especially complex. One was the use of control subsamples to check the possible sensitizing effect of repeated interviewing with the panel samples. Another complicating element was the great difference in size of schools and the great disparity in number of schools for the various size categories. Fifty percent of the school systems were in the two smallest size categories with five percent of the pupils, four percent of the schools were in the two largest size categories with almost 50 percent of the pupils.

1. A check of the difference in mean adoption scores among the four size of school strata in the district panel sample yielded the data shown in the table below. Note that there is a consistent increase in mean adoption scores as size of school system increases, but none of the differences between strata were significant at the .05 level. The closest was for the difference between strata I and IV, with a t of 1.99, for sample sizes of 26 and 51. A t-value of 2.00 is significant at the .05 level when the sample size is approximately 60.

Table 1: Mean Adoption Scores for Four Size of School System Strata for Fourth Phase Data with the District Panel Sample (April 1973)

Strata and Number of Pupils	Mean Adoption Score (Range was 0 - 6)	Standard Deviation
I (0-599 pupils)	0.69	1.57
II (600 - 2,499 pupils)	1.06	1.56
III (2,500 - 9,999 pupils)	1.27	1.63
IV (10,000 pupils and over)	1.39	1.37

With a t-value of 0.39 for the difference between strata III and IV, and a t-value of 1.01 between strata I and II, it seems justifiable to divide the district panel sample into two groups for the School System Typology analysis (Strata I and II vs. III and IV).

Table 2 shows the breakdown of the mean adoption scores into the various adoption categories used in the composite adoption measure. As in Table 1, these data are only for the District Panel sample, the only sample in which size strata were established in the sampling pattern.

Table 2: Adoption Levels by Each of Four Strata of Size of School System, District Panel Sample, Data Phase IV

Adoption Categories for Composite Measure	Strata for Size of School System									
	I		II		III		IV		Total	
	N	%	N	%	N	%	N	%	N	%
No awareness beyond that created by the interviews	21	80.8	33	52.4	24	47.1	16	31.4	94	49.2
Aware	0	0.0	16	25.4	11	21.6	15	29.4	42	22.0
Aware and sought information	2	7.7	4	6.3	5	9.8	12	23.5	23	12.0
Aware and considered use of method	0	0.0	2	3.2	4	7.8	1	2.0	7	3.7
Aware, sought information and considered use of program	1	3.8	3	4.8	3	5.9	6	11.8	13	6.8
Combination of earlier stages with trial or decision to adopt or reject	2	7.7	5	7.9	4	7.8	1	2.0	12	6.3
TOTAL	26	100.0	63	100.0	51	100.0	51	100.1	191	100.0
Average Adoption Score	0.69		1.06		1.27		1.39		1.16	

The most apparent differences are in the percentage who had taken action beyond the awareness created by the interviews; and the difference is greatest between stratum I (the smallest schools) and the other three strata.

2. Adoption scores were significantly different among some sample sets and phases of data collection. Given the lack of statistically significant differences in mean adoption scores among the different size strata, the next step is to compare the adoption scores among the various sample sets -- Brochure Panel, District Panel, Brochure Control and District Control -- and among the four phases of data collection for the panel samples.

Appendix Table D-1 shows the mean adoption scores for each of the four types of sample sets for each of the four data collection phases. It will be noted that the Brochure Panel sample set was consistently the highest for each data phase. The District Panel was next, and both were higher than the controls. The District Control sample sets did not differ significantly from the Brochure Control sample sets.

An inspection of the frequencies at each adoption level for the four phases of data collection show that only ten percent had gone beyond awareness of the programs at Phase I for the District Panel sample. At the Phase II data collection, 22 percent of the District Panel respondents had at least sought information about one or more of the reading programs; and by Phase IV, 29 percent had moved to one of the adoption stages beyond awareness of the programs. Comparable figures for the Brochure Panel sample were: 35 percent beyond the awareness stage at Phase I and 53 percent at Phase IV.

The District Control samples averaged about ten percent beyond the awareness stage and the Brochure Control samples showed 20 percent beyond the awareness stage at the later phases of data collection.

The following tables show the differences in mean adoption scores over the four phases of data collection. In Table 3 it will be noted that there were statistically significant gains in mean adoption scores between phase I data and the phase II, III, and IV data for the District Panel sample. However, the differences among the other phases were not significant.

Table 3: Comparison of Differences in Mean Adoption Scores Among the Four Phases of Data Collection for the District Panel Sample

Data Collection Phase	Data Collection Phase			
	I	II	III	IV
I	0	0.41*	0.64**	0.72**
II		0	0.23	0.31
III				0.08
IV				

*Significant at .005 level
**Significant at .001 level

In Table 4, a similar comparison for the Brochure Panel sample shows statistically significant differences between Phase I data and the data collected in Phases III and IV; however, none of the other differences were statistically significant.

Table 4: Comparison of Differences in Mean Adoption Scores Among the Four Phases of Data Collection for the Brochure Panel Sample

Data Collection Phase	Data Collection Phase			
	I	II	III	IV
I		0.22	0.58*	0.58*
II			0.36	0.36
III				0.00
IV				

*Significant at .02 level

A look at the number of school systems changing adoption levels within the two panel samples reveals that a majority did not change during the one-year

data collection period. In Table 5, it will be noted, on the other hand, that more than 1/3 did move toward adopting one of the reading programs between the phase I data collection and phase IV data collection.

Table 5: Number and Percentage of School Systems Changing Adoption Level Between Phase I and Phase IV Data Collection for Each of the Two Panel Samples

Direction of Change in Adoption Scores	Sample Set			
	District Panel		Brochure Panel	
	N	%	N	%
Increased	72	38.2	33	34.4
No change	110	58.2	59	61.5
Decreased	7	3.6	4	4.1
TOTAL	189	100.0	96	100.0

It is interesting to note that although the Brochure Panel sample had consistently higher adoption scores, the change in adoption level over time was virtually the same for the District Panel sample as for the Brochure Panel sample.

The gains in mean adoption scores as the data collection phases progress indicates the increasing adoption levels over time, but these could be due either to general gains in adoption of the programs among the school systems, or it could be stimulated by the reinterviewing. A look at Appendix Tables D-1 and D-2 confirms that the gains in adoption level were stimulated by the reinterviewing. It may be noted that the differences in mean adoption scores between the panel and control samples increased over time, while it may be seen in Appendix Table D-1 that the mean adoption scores for the control samples were fairly stable over time.

The data suggest that the repeated contacts stimulated increased action toward adoption of the programs. There was no effort in these interview contacts

to persuade the respondents to adopt any of the programs; however, if respondents asked where they could get more information, an address was given so they could write for additional information.

The data show that the adoption scores for the Brochure Panel were significantly higher than the District Panel at each data collection phase. This would be expected since these were school systems which had written for booklets. The differences are roughly 3/4 of a scale level.

3. Other selected measures for the four sample sets revealed similarities. The four types of samples were quite similar to the proportion of their time respondents said they devoted to reading programs. For each of the sample types, about 3/5 (59.7% - 61.8%) reported spending 1/4 time on work related to reading programs; about 1/4 (22.4% - 25.3%) reported that they devoted full time to reading programs. These respondents are persons who were identified by the Superintendent as those who coordinated or supervised reading programs within the school system. The detailed breakdown is shown in Appendix Table D-5.

The sample sets were quite similar also in patterns of decision making reported. Slightly more than 3/5 (61.1% - 66.1%) said the administrator nearly always carries out the vote of the staff. The reported level of autocratic-democratic patterns in decision making also are quite similar with a range of 85 to 95 percent saying the pattern was democratic in their school system. These divided about equally between somewhat democratic and very democratic. Appendix Table D-5 shows the proportion at each level for each sample type. That table also shows the proportion reporting each level of consulting and voting. While the percentages vary for each category of consulting and voting among the sample types, the differences are more pronounced

in the middle categories of participation and not in the two extremes of "no one participating" or "all teachers participating."

Comparing the composite measures on organizational complexity across the four sample types shows no statistically significant differences. Table 6 shows the mean scores for the composite measure which has a range of values from 11 to 99.

Table 6: Mean Scores for the Composite Measures of Organizational Complexity and External Contact for Each of Four Sample Types

Sample Type	Mean Scores	
	Organizational Complexity	External Contact
District Panel	24.8	29.7
District Control	25.2	30.0
Brochure Panel	20.4	30.0
Brochure Control	21.0	29.7

The composite external contact measure was virtually the same for each of the four sample types, as may be seen in Table 6 above.

Other comparisons of the measures on the four sample types may be seen in Appendix D.

C. Relationships Between Adoption Level and Other Variables

Although the relationships found between adoption and other variables were generally weak, there are some which suggest some directions for building communication strategies. It appears that the skewed distributions in the data tended to depress the correlations, thus the relationships may be stronger than the data analysis suggests.

Three variables which were extracted from 26 included in a Least Squares Delete analysis yielded a multiple correlation with the composite measure of

adoption of 0.47 accounting for 22 percent of the variance. The three variables were: (1) knew about the demonstration centers, (2) wrote for one or more of the booklets describing the reading programs, and (3) had a high proportion of the reading teachers holding membership in the International Reading Association (IRA).

The ratio of IRA membership to total number of reading teachers did not produce as high a simple correlation with the adoption measure as the composite measure of external contact had, but it was retained with the other two variables in the Least Squares Delete analysis. A separate analysis in which the composite external contact measure was used, while excluding the IRA/reading teachers ratio, yielded a multiple correlation practically the same as that with the IRA measure. In this case, it would seem more parsimonious to use the IRA measure, but the data do support the relationship of adoption level with contact external to the system. Even knowing of the demonstration centers and writing for the booklets are types of contact external to the system. Table 7 shows the partial and simple correlations along with the multiple correlation obtained in the Least Squares Delete analysis.

Table 7: Correlations of Selected Variables With Adoption Level for the School Systems in the District Panel Sample, Phase IV Data

Variable	Simple Correlations	Partial Correlations	Multiple Correlations
Knew about demonstration centers	0.37	0.32	Ry .123
Wrote for booklet	0.31	0.23	0.47
IRA/reading teacher ratio	0.25	0.19	
Composite measure of external contact	0.31		
Number of reading conferences attended	0.24		

There is much talk about the multivariate nature of the problems under study in communication. The results in the present analysis would support that claim. Only one of the three variables alone accounted for as much as ten percent of the variance; the three variables had partial correlations somewhat lower than the simple zero order correlations; but together they accounted for 22 percent of the variance.

If the variables in Tables 7 are taken two at a time and correlated with adoption, the multiple correlations are between 0.37 and 0.44. The strongest relationship is with knowing about the demonstration centers and writing for booklets. That multiple correlation is 0.44. Knowing about the demonstration centers and the composite external contact measure taken together correlate with adoption 0.43; knowing about the demonstration centers and the IRA/reading teacher ratio correlate 0.42; writing for the booklets and the composite external contact measure correlate with adoption 0.40; while writing for a bocklet and the IRA/reading teacher ratio correlate 0.37 with the adoption measure. It can be seen that by taking two variables, knowing about the demonstration centers and either the external contact measure or the IRA/reading teacher ratio, yields a relationship which accounts for 18 to 19 percent of the variance in adoption level. Adding a third variable, as was done with the Least Squares Delete, contributes an additional three to four percent to the variance accounted for.

These data offer encouragement as to the fruitfulness of pursuing development of measures of contacts external to the system as predictors of adoption behavior.

D. Typologies of School Systems

A factor analysis to identify typologies of school systems yielded two factors for each of the four types of samples of school systems for the phase IV data collection.

The discriminating variables between the two factors were: number of teachers, the ratio of administrators to teachers, and the composite measure of external contact. The differences in adoption levels between the two factors were not clear-cut. However, as with the other analyses, the adoption levels tended to be stronger for the larger school systems and for the higher levels of external contact.

The correlations appear to be depressed as a result of skewed distributions in the measures as noted in the previous section. This would also tend to produce less clear-cut factor structures from which to develop the typologies of school systems and the identification of variables which would discriminate between the factors.

E. Clusters of Variables Yielded by Elementary Linkage Analysis

Nine linkages emerged from the Elementary Linkage Analysis (McQuitty, 1957) of both the Brochure Panel and District Panel samples, phase IV data. These sets of linkages help to visualize some of the interrelationships among the variables included in the study.

Looking at the diagrams and descriptions of the variables in Appendix C, it will be noted that the largest set is one of 14 variables (Linkage #4) with the Brochure Panel sample. It contains variables related to organizational complexity. Eight of those variables came out in Linkage #6 and #7 for the

District Panel sample; the other six were on the periphery of the Brochure Panel Linkage.

Another large set is one containing variables pertaining to contacts external to the school system. It is Linkage #2 for the Brochure Panel and Linkage #4 for the District Panel sample.

It is interesting to note that the adoption level measure (Variable #31) is linked most closely with variables pertaining to information seeking behavior. Also of interest to note is that Variable #9 ("How autocratic or democratic is decision-making in your school?") links closely with the items on receptivity to change and implementation of new ideas within the school system within the past year. Note also that Variable #8 ("How often the administrator carries out the recommendations voted in by teachers") links with "quality of reading program" in the District Panel sample and with "implementing new ideas" in the Brochure Panel sample.

The Linkage Analysis supports the assumptions stated in Chapters I and II regarding which variables would fit together in sets for composite measures and which would relate to adoption.

F. Further Descriptive Data

Further data which may help provide insight into some of the characteristics of the school systems and the adoption behaviors will be presented here. For some of these, the number who could respond to the questions was limited due to the fact that respondents would have to be well acquainted with the programs in order to answer the questions. The data here will be based largely on the District Panel sample, since it is taken to be most representative of the population of all school systems.

1. Time of becoming aware, seeking information and deciding about the programs was concentrated in the period near the USOE mailing of the brochures about the programs. About 95 percent of the respondents reported becoming aware of the programs between January 1971 and June 1972, with about 50 percent becoming aware between July 1 and December 31, 1971. The flyers announcing the program and the availability of descriptive booklets were mailed during April of 1971.

Very few reported information seeking for each of the programs; the highest being ten for any one program. However, taken together, about 1/2 to 2/3 of those replying said they sought information after July 1, 1971. The programs which tended to be earliest in the information seeking pattern were: New York City; Thomasville, Georgia; Milwaukee, Wisconsin, Topeka, Kansas; Hartford, Connecticut; and Keokuk, Iowa. Of those who reported seeking information after receipt of the brochure, from 3/4 to 4/5 sought it between July 1971 and June 1972.

The times given most often for considering use of the programs extended from January 1971 to May 1973, with July 1969 to June 1970 being mentioned most for those who had considered use of the programs prior to receiving the brochure.

The earliest time reported for actual trial of the programs was July 1969, while the time for planning to try the programs extends from July 1972 to December 1975.

Among the District Panel respondents, five reported full-scale use of the Indianapolis program. One of those using the Indianapolis program also was using the Thomasville, Georgia program; and one each was using the Topeka and Milwaukee programs. Thus, seven (3.7%)of the school systems in the District Panel sample reported full-scale use of one or more of the programs. For the Brochure Panel sample, ten school systems (1/10) reported full scale use; five

of these for Indianapolis and the others spread among five programs.

2. What's needed to make your school system more innovative? In answer to that query, between 1/3 and 2/5 of the respondents said money; about 1/6 said in-service training; and another 1/6 said change attitudes of the staff or change the administrative climate in the school system. A breakdown of the responses is contained in Appendix Table D-7.

Several responses were tabulated under "other". Included in that set of responses are the following: increased communication within the school system; increased communication between parents and teachers; upgrading of staff; more visitations to model programs; leadership to inspire working together to build a program; more time to work with staff; more space and facilities; more sample questionnaires like this one; and public relations to inform the public of the value of change. Some responded that they already were one of the most innovative systems around or that nothing was holding them back.

3. Most respondents ranked their school systems high on receptivity to change. From 80 to 90 percent perceived their administrators as receptive to change; 84 to 87 percent perceived the teachers as receptive; and 82 to 86 perceived their school board as receptive to change. The detailed breakdown is in Appendix Table D-15.

When ranking their school system on innovativeness, 69 to 72 percent perceived their school system as average or somewhat above when compared to other school systems in their state. Details are in Appendix Table D-16. From 83 to 86 percent believe their school system is in the top half of the school systems in the state in quality of reading programs, and 86 to 90 percent believe their school system is in the top half in quality of teaching.

This perception of rank on quality and innovativeness could be a deterrent

to considering new programs. The belief that one is already above average may lead to a self satisfaction that limits seeking of new alternatives. These data also may suggest different criteria of judging one's school on that dimension. The change agent working in the school setting may need to develop some firm data which provide a basis for a school system to assess itself in relation to other school systems or in relation to some desired level of performance.

Twenty of the 191 respondents rated all three segments of the system -- school board, teachers, and administrators -- as very receptive, while only one respondent rated all three segments as very resistant to change. It's worthy of note that the rankings on receptivity to change did not correlate significantly with adoption level. With the distribution skewed so strongly toward receptivity, and the adoption measure skewed so heavily toward no action, it is not surprising that the correlation was of no consequence.

4. Characteristics of the programs as a factor influencing adoption could not be adequately tested due to the small number who felt they knew enough about the programs to respond to that set of questions. The scores of those who did reply tended toward the midpoint of the scales. The mean scores on relative complexity, relative advantage, compatibility with present program and divisibility for trial are shown in Appendix Tables D-8 to D-11.

5. Interviewing apparently stimulated writing for booklets about the programs. For the District Panel sample, about 10 percent had written for booklets prior to the interviews while 21 percent had written for booklets by the fourth phase of the interviewing conducted one year later.

It also became evident during the interviewing of the Brochure samples that although someone in the school system had written for the booklets describing the programs, the coordinator or superivosr of reading programs was not always aware

that the booklets had been ordered by the school system.

6. Contacts external to the school system for information about new programs were moderately frequent. About half of the respondents reported attending more than five reading conferences or professional meetings during the past year; 3/5 to 2/3 said it was very convenient to visit a college or university; and more than half have contact with university staff from one to 11 times a year, while about 1/7 have contact with university staff once a week or more.

About ten percent contact school systems 100 or more miles away as often as once a month; 1/3 to 2/5 contact school systems 15-100 miles away that frequently and half contact school systems less than 15 miles away one or more times a month. Appendix Table D-17 contains details of these contact measures.

7. Information sources beyond those covered in the external contact measures included: USOE, State Department of Education, school systems originating a program, in-service training, a school superintendent, and other teachers. These came in response to probe questions about further sources of information among those who had taken some action steps.

The kind of information which these respondents said they sought was that pertaining to results, curriculum materials which could be obtained, feasibility of using the program in their system and cost.

Compatibility with existing program and being near a school that was already using a program were listed as factors that contributed to initiating plans to use one of the new programs.

8. Membership in the International Reading Association was related to adoption level as noted in section C of this chapter. About 1/3 of the school systems in each of the four types of samples had no one on their staff who was a member of IRA. Thus, it appears that 2/3 of the school systems could be provided informati

about new reading programs through the IRA. With the positive correlation found between adoption level and the ratio of IRA members to total number of teachers working with reading, this would seem to be a source that should be fully utilized in promoting new programs.

9. Availability of demonstration centers was known by about 1/7 of the District Panel respondents and by about 1/5 of the Brochure Panel respondents. Less than ten percent of the respondents in the control samples reported knowing of the demonstration centers. Appendix Table D-14 contains these data.

Four of the District Panel sample respondents reported visits to one of the demonstration centers; and three of the Brochure Panel sample, and eight of the control sample respondents reported visits to the centers. That's approximately two percent of the respondents. These visits were about equally divided between the Indianapolis and Topeka centers, with seven visiting Indianapolis and eight visiting Topeka.

The feedback obtained from the demonstration centers was quite positive. Those who completed the feedback forms at the centers rated the demonstrations as very useful, interesting, informative, and up-to-date. A tabulation of those responses is contained in Appendix B.

10. Other correlations among variables which were of interest in the study are contained in Appendix Table D-18. It's interesting to note the strong relationship between the number of pupils in the school system and the composite measure of organizational complexity. Such a relationship would be expected. Also of interest is the negative correlation between organizational complexity and external contact. If the notions developed in the rationale chapter are valid, members of more complex organizations might well experience restrictions in their access to messages.

These correlations are suggestive of opportunities for further study of the measures being employed and their relationship to one another, as well as supporting some of the expected connections.

CHAPTER IV

Summary and Recommendations

A. Summary

1. Method. The study was designed to measure the adoption level over a period of one year for a set of ten reading programs. Two panel-type samples were selected and two control samples were drawn to check for the impact of reinterviewing the two panel samples.

One panel sample was a random sample of 18,600 USA school districts, stratified by four categories of school system size. This panel sample is referred to as the District Panel sample. The other panel sample was a set of school systems randomly selected from among those who had ordered one or more booklets describing the reading programs by returning a coupon from the brochure which was mailed to school systems to announce the existence of the programs. About ten percent of the school systems were in the population using the coupon and the sample of that population was labelled the Brochure Panel sample. The control samples were randomly selected from each of the two populations used to obtain the panel samples and were labelled District Control and Brochure Control, respectively.

An interview schedule was mailed to the office of the superintendent of the school systems in the samples with the instruction to provide it to the director or coordinator of reading programs in the system. WATS line telephone service was used to conduct the interviews, with the first stage being to identify the person in charge of reading programs, and schedule an appointment for the telephone interview. The data were then collected by telephone at the appointed time.

The panel sample members were interviewed four times at intervals of two to three months. Control samples were selected and interviewed concurrently with the second, third and fourth phases of the data collection.

The District Panel consisted of 200 school systems, 50 in each of the four strata; the Brochure Panel consisted of 100 school systems; the District Control samples each consisted of 67 school systems selected and yielded a total of 189 completed interviews for the three phases of data collection; the Brochure Control samples each consisted of 50 school systems and yielded a total of 147 completed interviews.

The data analysis included frequency counts and percentages for descriptive analyses, Chi Squares for the nominal level measures, multiple and partial correlations, factor analysis and elementary linkage analysis. To facilitate the analysis, composite measures were developed for adoption level, contact external to the school system, organizational complexity, and participation in decision making.

2. Findings. The literature review and rationale for the analyses pointed up an expected strong relationship between an open system which facilitated message flow and high adoption levels. This would lead to predictions of strong relationships between external contact measure and adoption level, and between adoption level and the exposure to messages pertaining to the reading programs.

Positive relationships also were predicted between adoption level and the variables pertaining to innovativeness of the system, participation in decision making, and the characteristics of the programs which suggested ease and advantage for the user. A negative relationship was predicted between adoption level and organizational complexity.

A first stage analysis yielded no statistically significant difference in

adoption level among the four size of school strata in the District Panel sample. Given that finding, the analyses which followed combined all four strata of the District Panel into one sample set. The correlational analyses were based mainly on the District Panel on the assumption that it was more representative of the total population of USA school systems.

The analysis of the data supports the positive relationships between adoption and external contact, and between adoption and exposure to messages about the reading programs. None of the other posited relationships survived the Least Squares Delete analysis. In that analysis, three variables yielded a multiple correlation of 0.47, accounting for 22 percent of the variance in adoption level.

The three variables which yielded statistically significant regressions and the multiple correlation of 0.47 are: knew about the demonstration centers for the reading programs, wrote for one of the booklets about the programs, and had a high proportion of the reading teachers in the International Reading Association (IRA). Substituting the composite measure of external contact for the IRA membership variable produced essentially the same multiple correlation.

The composite measure of external contact included: (1) convenience to the university combined with frequency of contact with university staff, (2) number of reading conferences and professional meetings attended per year, (3) measures of contact with staff in other school systems weighted for distance from the other school system, and (4) the ratio of IRA members to reading teachers in the school system.

The composite measure of external contact correlated 0.31 with adoption level, while the IRA/reading teacher ratio correlated 0.25 with adoption. However, as noted above, when these measures were combined with the other two variables -- knowing about demonstration centers, and writing for the booklets --

the multiple correlations were essentially the same. This suggests that the IRA membership variable is a useful component to include in the development of a communication strategy. The data also indicate that 2/3 of the school systems have one or more teachers holding membership in IRA, which also points to the value of this channel.

The correlation between adoption and knowing of demonstration centers was 0.37; between adoption and writing for the booklets was 0.31; and between adoption and number of reading conferences attended was 0.24. These data point up the multivariate nature of the adoption process. Knowing of demonstration centers accounts for about 14 percent of the variance in adoption level; adding external contact or IRA membership adds another four to five percent to the variance accounted for; and adding a third variable accounts for an additional three to four percent of the variance.

A factor analysis yielded two typologies of school systems. The variables which discriminated most clearly between these two factors were number of teachers, the ratio of administrators to teachers, and amount of external contact as indicated by the composite measure of external contact. The adoption levels were not clearcut between the two factors. It may be that the skewed distributions of the measures tended to depress the magnitude of the correlations, thus minimizing the potential for more clearly defined relationships.

The sets of variables identified through the elementary linkage analysis were consistent with the grouping of variables used in the composite measures. These were variables which, in the planning of the study, it was presumed would be tapping the same dimensions of behavior in school systems. It also was consistent with other analyses in tying the adoption measure to external contact measures. Another interesting linkage was that which tied receptivity to change

with how democratic the decision making process was perceived to be within the school system. The latter linkage also includes the extent to which the schools have implemented new ideas in teaching reading within the past year.

The period during which the gain in awareness of the programs was greatest was January 1971 to June 1972, the period which includes the April 1971 mailing of the brochures announcing the availability of booklets about the ten reading programs.

Money, in-service training, and change of attitude and administrative climate within the system were listed most often as what would be needed to make the respondents' school system more innovative. Most respondents (80 - 90 percent) believed that their staff -- teachers, administrators and school boards -- were receptive to change. Also about 4/5 rated their schools in the top half of the schools in their state in terms of quality of reading programs and quality of teaching. This perception may in itself be a deterrent to change.

Among the sources of information mentioned during the probing for additional sources were: USOE, State Department of Education, school systems originating new programs, in-service training, the school superintendent, and other teachers. The kind of information most often sought dealt with results obtained from using the program, curriculum materials needed to carry on the program, feasibility of the program for "my system", and cost.

About 1/7 of the respondents reported that they knew of the existence of demonstration centers. While feedback is not available from each of those respondents, feedback was obtained from a group of visitors to the two demonstration centers. That feedback was very positive.

B. Recommendations

1. In developing a communication strategy, the data strongly suggest the importance of facilitating contact with sources of information external to the school system. One of the most obvious suggestions from the findings is to feed messages about new reading programs through the International Reading Association.

Other suggestions coming from the data include facilitating the acquisition of booklets describing the programs, feeding information about new programs through universities, and making available reading conferences and centers where new methods may be demonstrated and discussed.

From 3/5 to 2/3 of the respondents said it was very convenient to visit the university, and convenience to the university correlated 0.24 with adoption level. The relationship between knowing of the demonstration centers and adoption level was one of the strongest obtained. That coupled with the positive feedback from those who filled out survey forms after visits to the demonstration centers would seem to indicate that it would be useful to continue using that means of communicating about new programs.

Only two demonstration centers were identified as operating within the context of the present study, so it would seem advisable to expand this mode of dissemination. Further support for that recommendation is inherent in the comments of respondents that contact with nearby school systems using a new program was factor in their decision to adopt a program. A part of the communication strategy would then be to make school systems aware of the location of systems in which exemplary programs were operating; then take steps to facilitate visits by staff to see the exemplary programs in operation.

2. In looking ahead to further studies, one study which would appear to have both practical and theoretic payoff would be an analysis of the communication

flow within a school system. This could identify more clearly the points of entry into a school system of messages regarding new programs and the dissemination of those messages within the system. One aspect of the present study which indicates the need for such a study was the time involved in making contact with the person finally identified as coordinator of reading programs, and the repeat mailing required to get the interview schedules to the person designated as coordinator of the reading programs.

Additional studies of the diffusion of programs within the school systems could provide the opportunity to strengthen the measures and analysis of: (1) adoptive action, (2) external contact, (3) the structure which facilitates the flow of messages about new programs, and (4) the decision process regarding the use of the new programs. With those and perhaps other refinements, it may be possible to identify stronger predictors of adoptive behaviors.

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APPENDIX A

A-1 Basic Interview Schedule With Covering Letter and Instructions To Respondents.

A-2 Second And Third Phase Questions For Panel Samples And Letter Alerting Respondents For Interviews.

A-3 Feedback From Demonstration Centers.

A-4 Guides And Opening Speech For Interviewers.

MICHIGAN STATE UNIVERSITY East Lansing . Michigan 48823

College of Communication Arts . Department of Communication

Dear Sir:

The U.S. Office of Education and Michigan State University would like you to help with a study of the diffusion of reading improvement programs.

Our study focuses on ten reading programs selected specifically for this study. We would like to determine the level of interest and use for any of these programs within your school system. In addition, we would like to gather some general information about your school system to help us better understand the organization and communication patterns of schools across the nation, and how these factors relate to the diffusion of reading programs.

A telephone interviewer will be contacting you soon to set a convenient time for a telephone interview. He will probably first call on the date listed at the bottom of this letter. If the time is convenient when he first calls, you may complete the interview then: if not you may set another time.

A copy of the questionnaire is enclosed. We'd suggest that you look it over right away.

We will appreciate your cooperation with us in this study.

Sincerely yours,

L. E. Sarbaugh, Project Director
Department of Communication

OMB 51 R0927
Approval Expires

INVESTIGATION OF COMMUNICATION EFFORTS AND THEIR RELATION TO STAGES OF ADOPTION OF SELECTED READING PROGRAMS

Instructions for Respondents

1. We'd suggest that you keep this questionnaire near your telephone. It will expedite the interview if you have it available for reference when the interviewer calls.

2. You may want to mark some of your answers on your copy of the questionnaire before the interview. We'd encourage that.

3. You may need to check with the records section of your school system in order to get information to answer a few of these questions, e.g., questions 17, 19, and 20.

4. Some questions inquire about other people in your school system. Since this is a study of organizations (school systems) not individuals, other people should always be identified only by their title or position in the organization. We do NOT want to know their names. There is one exception to the "no name" rule -- we will be asking for your name. This is only to make it easier to contact you again later, in the event that we need more information about your school's reading programs.

5. Unless otherwise indicated, the questions in this schedule refer to your school system (school district).

YOUR RESPONSES TO THIS INTERVIEW WILL BE KEPT IN STRICTEST CONFIDENCE. You will note that there is a code number in the top left hand corner of the first page of the interview schedule. This will be used to keep different sets of responses coming from the same school system connected. However, neither your name or that of your school system will be associated with the completed interview schedule or the data processing decks on which responses will be stored for tabulation and analysis.

SURVEY OF DIFFUSION OF
TEN READING PROGRAMS

1. What is your exact job title in the reading program?

_____

2. What are your duties besides your work with your school system's reading program?

_____

3. About how much of your time are you able to devote to your duties with the reading program?

a. _____ 1/4 time

b. _____ 1/2 time

c. _____ 3/4 time

d. _____ full time

4. What is the title of the top administrator of the entire school system?

_____
(title or position)

5. How many assistant or associated administrators report directly to him?

_____ assistants or associates

_____ none

6. What are their titles?

a. _____

b. _____

c. _____

7. How many building principals are there in your school system?

_____

8. How many special program directors are there in your school system?

_____ program directors

_____ none

9. What are the programs for which they are responsible?

   a. _____

   b. _____

   c. _____

   d. _____

   e. _____

10a. What is the title (or position held) by your immediate supervisor?

_____

b. What is the title (or position) held by your immediate superior's boss?

_____

c. Now let's go one more level. What is the title of the person that your immediate superior's boss reports to?

_____

d. List any others between this person and top administrator in your school system.

_____

e. In your position with respect to the reading program, how many different positions are there between you and persons that actually teach reading to the students?

_____ none

_____ no. of positions: please list the titles of these positions

_____

11. When your school system is considering new programs, who all is involved in the decision-making process, and in what way? Please number below the usual sequence of consulting, polling, etc. in this process.

   a. _____ none of the teaching staff is consulted

   b. _____ entire teaching staff is consulted

   c. _____ some group within the teaching staff (i.e., curriculum committee is consulted)

   d. _____ all affected teachers are consulted

   e. _____ some group from within the affected faculty is consulted

   f. _____ entire teaching staff is polled

   g. _____ some group within the teaching staff (i.e., curriculum committee) is polled

   h. _____ all affected teachers are polled

   i. _____ some group from within the affected faculty is polled

   j. _____ other (please explain)

12. After the various forms of consultation, a final decision among the teaching staff may be made. Please indicate who on the teaching staff is given the final vote in the decision-making process.

a. _____ none of the teaching staff is given a vote

b. _____ entire teaching staff is given a vote

c. _____ some group within the teaching staff is given a vote (i.e., curriculum committee)

d. _____ all affected teachers are given a vote

e. _____ some group selected from the affected teachers is given a vote

f. _____ other (please explain)

13. Who makes the final decision on the adoption or non-adoption of a new program?

_____
(name of group or position and title of individual)

14. Who has the right to request that a new program be considered for adoption?

_____
(position or title)

15a. How often does the administrator of your school system carry out the action recommended by a vote of the teachers?

a. _____ nearly always

b. _____ about 3/4 of the time

c. _____ about half of the time

d. _____ about 1/4 of the time

e. _____ hardly ever

b. Considering the decision process in your school system, would you say the process is:

a. _____ very autocratic

b. _____ somewhat autocratic

c. _____ somewhat democratic

d. _____ very democratic

16. If you were to decide that your school system should adopt a new or modified reading program, what procedures would you have to follow to secure its adoption?

17. How many pupils do you have enrolled in your school system?

a. _____ 0 - 299
b. _____ 300 - 599
c. _____ 600 - 999
d. _____ 1,000 - 2,499
e. _____ 2,500 - 4,999
f. _____ 5,000 - 9,999
g. _____ 10,000 - 24,999
h. _____ 25,000 - over

18. Is your school system considered:

a. _____ rural
b. _____ suburban
c. _____ metropolitan

19. What is the per pupil expenditure for operating your school system?

a. _____ under $ 450
b. _____ $ 450 - 549
c. _____ $ 550 - 699
d. _____ $ 700 - over

_____ actual amount

20. What percentage of teachers and administrators do you have in your school system at the following educational levels?

	Teachers	Administrators
less than BA	a. ___ %	e. ___ %
BA but not MA	b. ___ %	f. ___ %
MA but not Ph.D.	c. ___ %	g. ___ %
Ph.D. or more	d. ___ %	h. ___ %
TOTAL	100 %	100%

i. ___ total number of teachers

j. ___ total number of administrators

21. How convenient is it for members of your staff (including you) to visit a college or university?

a. _____ very convenient
b. _____ somewhat convenient
c. _____ somewhat inconvenient
d. _____ very inconvenient

22. How frequently does someone from your reading staff (including yourself) contact a university staff member?

a. _____ once a week or more
b. _____ 1 - 3 times per month
c. _____ 6 - 11 times per year
d. _____ 1 - 5 times per year
e. _____ less than once a year

23. Are you a member of the International Reading Association (IRA)?

_____ yes
_____ no

24. How many staff members (including yourself) in your school system are currently working directly with reading programs?

_____

25. How many teachers and other administrators in your school system are members of IRA including yourself?

_____

26. How many different reading conferences and/or professional meetings have been attended by you or someone of your reading staff within the last 12 months?

a. _____ none
b. _____ one
c. _____ 2 - 3
d. _____ 4 - 5
e. _____ more than five

27. Within the last year, did you receive a brochure from the National Center for Educational Communication/USOE entitled "Model Programs in Reading" listing ten reading improvement programs from across the nation?

_____ yes
_____ no (if no, go to Page 6)

28. If yes, what did you do with the brochure when you received it?

NOTE:

If the respondent is not aware of any of the ten "Model Programs in Reading," go to question 45, page 12.

BELOW IS A CHART LISTING TEN READING PROGRAMS SELECTED FOR THIS STUDY BY THE OFFICE OF EDUCATION. WE WOULD LIKE TO KNOW YOUR LEVEL OF AWARENESS AND USE OF ANY OF THESE PROGRAMS. WILL YOU PLEASE GIVE US THIS INFORMATION BY COMPLETING THE CHART BELOW:

29. In column A, please indicate when you first learned about any of these programs.

30. In column B-1, please check those programs for which you sought additional information prior to receiving the brochure; in column B-2, check those programs for which you sought additional information after receiving the brochure or this interview schedule?

31. In column C-1, please check any programs your school system had considered using prior to receiving the brochure; in column C-2, check any programs your school system has considered using after receiving the brochure.

32. In column D-1, please indicate the approximate date when, if at all, your school system plans to begin a trial use of any of these programs; in column D-2, indicate the approximate date when your school system first tried using any of these programs.

33. In column E-1, please check those programs which your school system is now using on a full scale; in column E-2, check those programs which your school system plans to use on a full scale in the future.

	A.* First Knew About MO./YR.	B. Sought Information B-1 MO/YR prior	B. Sought Information B-2 MO/YR after	C. Considered Using C-1 prior	C. Considered Using C-2 after	D. Trial Use D-1 Plan MO/YR.	D. Trial Use D-2 Have tried MO/YR.	E. Full Scale Use E-1 Now Using	E. Full Scale Use E-2 Plan to MO/YR.
Marysville, California									
Chicago Heights, Ill.									
Pojoaque, New Mexico									
Indianapolis, Ind.									
New York City, N.Y.									
Thomasville, Georgia									
Milwaukee, Wisc.									
Topeka, Kansas									
Hartford, Conn.									
Keokuk, Iowa									

* If you are not aware of any of these programs other than through seeing them listed in this interview schedule, proceed to Question #5. Complete columns B, D, C, and E for those programs you know about.

WE WOULD LIKE YOU TO RATE THESE PROGRAMS AS THEY COMPARE TO YOUR PRESENT PROGRAM. OF COURSE, YOU'LL BE ABLE TO ANSWER ONLY FOR THOSE PROGRAMS YOU KNOW ABOUT.

34. On this chart, would you indicate the relative advantage of the programs as compared to your present program.

Compared to our present Program, the program in . .	Much Better	Somewhat Better	About The Same	Somewhat Worse	Much Worse
a. Marysville, California is:					
b. Chicago Heights, Ill. is					
c. Pojoaque, New Mexico is:					
d. Indianapolis, Indiana is:					
e. New York City, N. Y. is:					
f. Thomasville, Georgia is:					
g. Milwaukee, Wisc. is:					
h. Topeka, Kansas is:					
i. Hartford, Conn. is:					
j. Keokuk, Iowa is:					

Additional comment, if any:

35. On this chart, would you indicate the relative complexity of each of these programs. One program is more complex than another if it contains the same elements as another and something more.

The program in	Very Complex	Fairly Complex	Not Very Complex	Not Complex At All
a. Marysville, California is:				
b. Chicago Heights, Ill. is:				
c. Pojoaque, New Mexico is:				
d. Indianapolis, Indiana is:				
e. New York City, N. Y. is:				
f. Thomasville, Georgia is:				
g. Milwaukee, Wisc. is:				
h. Topeka, Kansas is:				
i. Hartford, Conn. is:				
j. Keokuk, Iowa is:				
The present program in our school is:				

Additional comments, if any:

36. On this chart, would you indicate how well the programs below fit in with your present school philosophy, teaching staff, resources, methodology, etc.

Thinking of my school system, the program in. . .	Fits Very Well	Fits Fairly Well	Doesn't Fit Very Well	Doesn't Fit At All
a. Marysville, California:				
b. Chicago Heights, Ill.:				
c. Pojoaque, New Mexico:				
d. Indianapolis, Indiana:				
e. New York City, New York:				
f. Thomasville, Georgia:				
g. Milwaukee, Wisc.:				
h. Topeka, Kansas:				
i. Hartford, Connecticut:				
j. Keokuk, Iowa:				

Additional comments, if any:

37. On this chart, would you indicate your judgment of the ease with which each of these programs can be tried on a small scale.

In my judgment, the program in	Very Easy To Try	Fairly Easy To Try	Fairly Difficult To Try	Very Difficult To Try
a. Marysville, California would be:				
b. Chicago Heights, Ill. would be:				
c. Pojoaque, New Mexico would be:				
d. Indianapolis, Indiana would be:				
e. New York City, N. Y. would be:				
f. Thomasville, Georgia would be:				
g. Milwaukee, Wisc. would be:				
h. Topeka, Kansas would be:				
i. Hartford, Conn. would be:				
j. Keokuk, Iowa would be:				

Additional comments, if any:

39. Has anybody in your school system written on behalf of the system for any of the leaflets listed on the brochure from the National Center for Educational Communication?

_____ yes
_____ no (if no, go to question 40)

39. What has been done with these leaflets, or if they have not yet been received, what do you intend to do with these leaflets?

_____

40. Do you know about any of the four demonstration centers operating for interested school staff persons to visit?

_____ yes
_____ no (if no, go to question 45)

41. Which centers, if any, have you or any of your staff visited?

a. _____ none (if none, go to question 44)
b. _____ Indianapolis
c. _____ Topeka
d. _____
e. _____

42. Did this visit help you and your staff in trying to decide whether or not to use any of these programs?

_____ yes
_____ no

43. If yes, how, if no, why not?

_____

44. Which demonstration centers, if any, are you planning that you or any of your staff will visit?

a. _____ none
b. _____ Indianapolis
c. _____ Topeka
d. _____
e. _____

On the following questions we do not intend to imply that any answer is either a good or bad reflection on your school district. We simply want, as objectively as possible, your assessment of proneness toward innovation. Remember, your answers will be kept confidential and will not be associated in any way with you or your school district. They will be identified only by a code number in the data decks.

45. When it comes to trying new reading programs, my school system tends to be:

a. _____ among the first
b. _____ somewhat earlier than most
c. _____ kind of in the middle
d. _____ somewhat later than most
e. _____ among the last

Sometimes part of the school system is receptive to implementation of new programs, while other parts of the system are resistant to new programs. How would you rate your school board, teaching staff and administrators as to their receptivity to new ideas? Please check the most descriptive point on each of the scales.

46. My school board is:

_____ very resistant
_____ somewhat resistant
_____ somewhat receptive
_____ very receptive

47. Our teaching staff is:

_____ very resistant
_____ somewhat resistant
_____ somewhat receptive
_____ very receptive

48. Our administrators are:

_____ very resistant
_____ somewhat resistant
_____ somewhat receptive
_____ very receptive

49. How would you rank your school system on innovativeness compared to most other schools in the state?

_____ much more
_____ somewhat more
_____ about the same
_____ somewhat less
_____ much less

50. What would need to be done to make your school more innovative?

_____

51. How would you rank your school system among other schools in the state as far as the quality of the reading program?

_____ upper one-fourth
_____ 2nd one-fourth
_____ 3rd one-fourth
_____ bottom one-fourth

52. How would you rank your school system overall in terms of the quality of its teaching program compared to other schools in your state?

_____ upper one-fourth
_____ 2nd one-fourth
_____ 3rd one-fourth
_____ bottom one-fourth

53. Has your school implemented any ideas in the last year to improve the quality of their reading instruction?

_____ yes
_____ no

54. If so, briefly explain.

_____

What would you estimate is the frequency of communication about reading programs between the reading staff of your school system and the reading staff of school systems that are:

55. more than 100 miles away?

a. _____ one or more times a week
b. _____ at least once a month
c. _____ at least once a year
d. _____ seldom

56. more than 15 miles but less than 100 miles away?

a. _____ one or more times a week
b. _____ at least once a month
c. _____ at least once a year
d. _____ seldom

57. less than 15 miles away?

a. _____ one or more times a week
b. _____ at least once a month
c. _____ at least once a year
d. _____ seldom

THE INFORMATION ON THIS SHEET WILL BE KEPT CONFIDENTIAL, AND YOUR NAME WILL NOT BE ASSOCIATED WITH ANY OF YOUR OTHER RESPONSES. IT WILL BE DETACHED FROM THE REST OF THE INTERVIEW SCHEDULE AND THE RESPONSES CONNECTED WITH OTHER DATA ONLY THROUGH THE CODE NUMBER.

DEMOGRAPHIC INFORMATION

1. TITLE OF YOUR POSITION _____

2. ARE YOU A TENURED SCHOOL STAFF MEMBER?

   _____ YES
   _____ NO

3. NO. OF YEARS EXPERIENCE IN:

   A. _____ TEACHING
   B. _____ ADMINISTRATION
   C. _____ OTHER (SPECIFY) _____

4. NO. OF YEARS WITH PRESENT SCHOOL _____

5. WHAT SUBJECT AND/OR GRADES ARE YOU CURRENTLY TEACHING _____

   _____

6. PLEASE CHECK DEGREE(S) COMPLETED AND YEAR:

   a. _____ B.A. _____ Year

   b. _____ M.A. _____ Year

   c. _____ PhD. _____ Year

   d. _____ NUMBER OF COURSES TAKEN BEYOND DEGREE IN LAST 3 YEARS

7. AGE:

   _____ 25 OR UNDER _____ 36 - 45 _____ 56 OR OLDER
   _____ 26 - 35 _____ 46 - 55

INTERVIEW SCHEDULE FOR PANEL SAMPLES
SECOND AND THIRD PHASE DATA COLLECTION

The introduction and probes used during the second and third phase data collection covered the items on p.6 of the questionnaire in Appendix A-1 and the probe questions on sources and kinds of information sought regarding any of the programs.

Suggested Introduction: "HELLO, I'M _____ FROM MICHIGAN STATE UNIVERSITY. WE TALKED WITH YOU LAST (Date) ABOUT TEN READING PROGRAMS WHICH THE NATIONAL CENTER FOR EDUCATIONAL COMMUNICATION IN HEW HAS BEEN ENCOURAGING SCHOOLS TO CONSIDER ADOPTING. AT THAT TIME, WE MENTIONED THAT WE WOULD CONTACT YOU AGAIN IN A COUPLE OF MONTHS. WE'D LIKE TO KNOW WHAT THINKING YOU'VE DONE OR WHAT ACTION YOU'VE TAKEN REGARDING ANY OF THE TEN PROGRAMS SINCE WE LAST TALKED TO YOU."

From that point, the next statement depended on the adoption level reported at the previous interview. The list below contains the sets of "first questions" which were used.

1. WHEN WE CONTACTED YOU LAST (DATE) YOU INDICATED THAT YOU WERE NOT AWARE OF ANY OF THE TEN READING PROGRAMS. WHICH, IF ANY DO YOU KNOW MORE ABOUT NOW?

2. WHEN WE CONTACTED YOU LAST (DATE) YOU INDICATED THAT YOU WERE AWARE OF AT LEAST ONE OF THE TEN READING PROGRAMS. DID YOU SEEK ANY INFORMATION CONCERNING THE READING PROGRAMS PRIOR TO RECEIVING THE BROCHURE FROM USOE?

3. WHEN WE CONTACTED YOU LAST (DATE) YOU INDICATED THAT YOU HADN'T RECEIVED A BROCHURE YET, BUT THAT YOU HAD SOUGHT INFORMATION ABOUT THE READING PROGRAMS. HAVE YOU SOUGHT ANY INFORMATION AFTER YOU RECEIVED A BROCHURE? (For those who indicated they had received a brochure.)

4. WHEN WE CONTACTED YOU LAST (DATE) YOU INDICATED THAT YOU SOUGHT INFORMATION AFTER YOU RECEIVED A BROCHURE FROM USOE. IN THE MEANTIME, HAVE YOU CONSIDERED USING ANY ONE OF THE TEN READING PROGRAMS? IF SO, PLEASE TELL ME THE MONTH AND YEAR THIS OCCURRED? HAVE YOU SOUGHT FURTHER INFORMATION?

5. WHEN WE CONTACTED YOU LAST (DATE) YOU INDICATED THAT YOU CONSIDERED USING ONE OF THE TEN READING PROGRAMS PRIOR TO RECEIVING THE BROCHURE FROM USOE. AT THIS TIME, ARE YOU PLANNING TO USE ANY OF THE TEN READING PROGRAMS ON A TRIAL BASIS. IF SO, PLEASE TELL ME THE MONTH AND YEAR YOU EXPECT THE TRIAL WILL BEGIN.

6. WHEN WE CONTACTED YOU LAST (DATE) YOU INDICATED THAT YOU HAD CONSIDERED USING ONE OF THE TEN READING PROGRAMS AFTER YOU RECEIVED A BROCHURE FROM USOE. AT THIS TIME, ARE YOU PLANNING TO USE ANY OF THE TEN READING PROGRAMS ON A TRIAL BASIS? IF SO, PLEASE TELL ME THE MONTH AND YEAR YOU EXPECT THE TRIAL WILL BEGIN.

7. WHEN WE CONTACTED YOU LAST (DATE) YOU INDICATED THAT YOU WERE USING ONE OF THE TEN READING PROGRAMS ON A TRIAL BASIS. AT THIS TIME, ARE YOU USING ANY OF THESE PROGRAMS ON A FULL SCALE BASIS? (IF SO,) PLEASE INDICATE BELOW WHICH PROGRAM IS BEING USED. (IF NOT,) ARE YOU STILL USING IT ON A TRIAL BASIS.

8. WHEN WE CONTACTED YOU LAST (DATE) YOU INDICATED THAT YOU WERE USING ONE OF THE TEN READING PROGRAMS ON A FULL SCALE BASIS. AT THIS TIME, ARE YOU STILL USING THIS PROGRAM ON THE SAME FULL SCALE BASIS, OR HAS YOUR SCHOOL SYSTEM DECIDED TO REJECT ANY OF PART OF THIS PROGRAM?

9. WHEN WE CONTACTED YOU LAST (DATE) YOU INDICATED THAT YOU HAD USED ONE OF THE TEN READING PROGRAMS, BUT THAT YOU REJECTED IT LATER. HAVE YOU REJECTED THE ENTIRE PROGRAM OR ARE YOU STILL USING A PART OF IT?

The interview schedules were prepared with the appropriate starting point allowing space to record what action had been taken on later adoption levels, plus space to record responses to probes for source and kind of information. Respondents also were asked to respond to the items on relative advantage, relative complexity, compatibility and ease of trial (p.7 to 10 in Appendix A-1).

The following letter was mailed to alert respondents to the second phase interview and modified slightly for the third phase:

Dear _____:

I would like to take this opportunity to thank you for your kind cooperation during our initial interview. As was mentioned at that time, we are going to take the liberty of telephoning you again to discuss any additional thought or action you've taken concerning the ten reading improvement programs that we talked about during our initial interview.

However, the interview this time will only take five to ten minutes. One of our interviewers will be calling you within the next week to interview you or to make an appointment for an interview time that is convenient for you.

As soon as we complete the study, we will make certain that those of you who requested copies of our findings will receive them.

Sincerely yours,

L. E. Sarbaugh, Project Director
Department of Communication

LES/sm

STUDY OF DIFFUSION OF READING PROGRAMS

Feedback From Demonstration Centers

Center visited _____ Date _____

1. HOW DID YOU FEEL ABOUT THE DEMONSTRATION OF THE READING PROGRAM YOU SAW HERE? Rate the demonstration of the program on each of the five scales below.

		+2	+1	neutral	-1	-2	
a.	useful	( )	( )	( )	( )	( )	not useful
b.	interesting	( )	( )	( )	( )	( )	not interesting
c.	informative	( )	( )	( )	( )	( )	not informative
d.	exciting	( )	( )	( )	( )	( )	dull
e.	up-to-date	( )	( )	( )	( )	( )	out-of-date

2. WHAT LED YOU TO VISIT THIS DEMONSTRATION CENTER?

3. HOW DID YOU FIRST LEARN ABOUT THIS READING PROGRAM?

4. HOW DID YOU LEARN ABOUT THE OPPORTUNITY TO SEE THE PROGRAM DEMONSTRATED HERE?

5. WHAT DID YOU FEEL WAS MOST USEFUL AMONG THE ACTIVITIES TO WHICH YOU WERE EXPOSED DURING YOUR VISIT TO THE DEMONSTRATION CENTER? (Please answer in terms of help you received in deciding about the use of this reading program in your school system.)

6. WHAT DID YOU FEEL WAS LEAST USEFUL AMONG THE ACTIVITIES TO WHICH YOU WERE EXPOSED DURING YOUR VISIT TO THE DEMONSTRATION CENTER? (Please answer in terms of help you received in deciding about the use of this reading program in your school system.)

7. WHAT HAVEN'T YOU OBTAINED DURING THIS VISIT THAT YOU WISH YOU MIGHT HAVE?

USE THIS SPACE FOR GENERAL REACTION, COMMENT, OR SUGGESTIONS ABOUT OPERATION OF THE DEMONSTRATION CENTER . . .

PLEASE FILL IN THE FOLLOWING INFORMATION. YOUR NAME WILL NOT BE ASSOCIATED WITH ANY OF YOUR RESPONSES.

1. Your name _____

2. Position _____

3. School or other organization _____
(name)

4. Type of school (Check one in each column)

_____ Elementary	_____ Public
_____ Secondary	_____ Private - church affiliated
_____ College	_____ Private - non-church affiliated

5. Please indicate the number of pupils in your school system (district).

a. _____ 0 - 299
b. _____ 300 - 599
c. _____ 600 - 999
d. _____ 1,000 - 2,499
e. _____ 2,500 - 4,999
f. _____ 5,000 - 9,999
g. _____ 10,000 - 24,999
h. _____ 25,000 - over

GUIDES FOR INTERVIEWERS

1. Call superintendent's office and ask for person to whom material regarding special reading programs would be delivered. (Ask if call can be transferred, or redial call.)

   a. Verify that this person is in charge of reading programs.

2. Once person in charge is contacted, ask if he has received the cover letter explaining the study and interview schedule for the study which was sent to the school system about two weeks ago. If he does not have the interview schedule, set a time for a return call to the interviewee (the return call will take approximately 20-30 minutes), and ask him to locate the interview schedule to have in front of him during the return call. (This is to avoid misinterpretation and for efficient use of his time.) Explain to the interviewee that it would be helpful if he could review the interview schedule before the return call to insure accurate responses for you to record.

3. Throughout the questionnaire, "school system" refers to school district (i.e., school system for the City of Detroit, Walled Lake Consolidated Schools, etc.). The school system includes all elementary, junior high, and senior high schools under the auspices of a common educational governing body.

4. Some questions inquire about other people in the school system. Since this is a study of organizations (school systems), not individuals, other people should always be identified by their title or position in the organization. We do NOT want to know their names. Point out to the respondent at the beginning and again before #45 that his responses will be confidential and will not be associated with his school district when the data are reported.

5. If for any question you need more space, write on the back of the interview schedule.

6. If interviewee does not have specific data to answer a question, ask him to estimate and mark responses as estimate.

7. On questions 34-37, identify comments, if any, by the letter identification of the program to which the comments refer.

8. If interviewee says he can't answer or doesn't know, write in this response. The "don't know" option is not included because we want to encourage respondents to answer.

In the training of interviewers, each interviewer will read through the schedule first, then any questions will be discussed with the project director and the supervisor of the interviewing. Following this, the interviewers will interview the project director or the supervisor of interviewing.

OPENING SPEECH FOR TELEPHONE INTERVIEWER
(Use at beginning of interview)

(Introduction for call used to set interview time.)

"I'M _____ OF MICHIGAN STATE UNIVERSITY. WE'RE CONDUCTING A STUDY FOR THE U.S. OFFICE OF EDUCATION ON THE DIFFUSION OF SOME NEW READING PROGRAMS. YOUR SUPERINTENDENT (OR SUPERINTENDENT'S OFFICE) HAS DIRECTED US TO YOU AS THE PERSON RESPONSIBLE FOR COORDINATING READING PROGRAMS IN YOUR SCHOOL SYSTEM. HAVE YOU RECEIVED A LETTER AND AN INTERVIEW SCHEDULE FROM US?"

(If yes, ask if he has it nearby, and whether this is a convenient time to go through the interview schedule. If he hasn't seen the letter and schedule, tell him we will mail one to him and then we would like to call about one week later, then say, "IT WILL HELP COMPLETE THE INTERVIEW MORE QUICKLY AND ACCURATELY IF YOU COULD LOOK OVER THE QUESTIONS BEFORE I CALL BACK. WE FIND THAT IT TAKES ABOUT 20 MINUTES. IT MAY BE A LITTLE MORE OR A LITTLE LESS DEPENDING ON HOW MUCH DETAIL YOU WISH TO GIVE ON SOME OF THE QUESTIONS.")

(Statement to use at beginning of interview.)

"I'M _____ FROM MICHIGAN STATE UNIVERSITY. I'M THE PERSON WHO CALLED YOU ABOUT THE READING PROGRAM STUDY. DID YOU GET A COPY OF THE INTERVIEW SCHEDULE? (yes) AND DO YOU HAVE IT WITH YOU NOW? THERE'S A CODE NUMBER IN THE TOP LEFT HAND CORNER OF THE FIRST PAGE. DO YOU FIND IT? THAT NUMBER WILL BE USED INSTEAD OF YOUR NAME OR YOUR SCHOOL NAME TO IDENTIFY YOUR RESPONSES ON THE COMPLETED INTERVIEW SCHEDULE AND ON THE DATA PROCESSING CARDS. WE DO THIS TO INSURE THAT YOUR RESPONSES ALWAYS WILL BE CONFIDENTIAL. WE USE THE CODE NUMBER TO INSURE THAT THE RESPONSES FROM A GIVEN SCHOOL ARE KEPT TOGETHER."

(For those in the panel sample, add: "WE ALSO WANT TO CHECK BACK WITH YOU IN ABOUT TWO MONTHS TO SEE WHAT CHANGES IF ANY MAY HAVE TAKEN PLACE IN THE WAY YOU ARE HANDLING READING PROGRAMS, NEW ONES YOU MAY HAVE HEARD ABOUT OR HAVE BEEN THINKING ABOUT TRYING. THOSE RESPONSES ALSO WILL BE ADDED TO THE ONES YOU GIVE TODAY. AGAIN, WE WILL NOT CONNECT YOUR NAME OR YOUR SCHOOL NAME WITH ANY OF THE RESPONSES YOU GIVE.")

"LET'S TURN TO QUESTION NO. 1 . . ." (Go through the interview schedule.)

Summary of Feedback From Reading Program Demonstration Centers

Those visiting the demonstration centers seemed generally pleased with the experience. Most were teachers and most (4/5) worked in elementary schools.

With only a few exceptions, those who responded rated the demonstrations as very useful, interesting, informative, and up-to-date. There was some reluctance to rate the demonstrations as highly exciting, but no one rated them as dull.

The things that appealed most to the visitors were the opportunities to see the methods being used with children in classrooms and the opportunities to get hold of some of the materials being used by teachers and tutors.

The following pages give more details of the responses and show where visitors first learned about the programs and the opportunity to visit the centers. They also list some of the general comments received from the visitors. Although only 18 forms were returned from Topeka visitors and only 16 from Indianapolis, the consistency of positive responses suggest that the participants felt the visit to the demonstration center was very worthwhile.

Responses to Feedback Questions By Visitors
To Topeka, Kansas Demonstration Center

How do you feel about the demonstration of the reading program you saw here?

	N	%
1 = Useful	15	83
2 =	2	11
3 =	0	0
4 =	0	0
5 = Not Useful	0	0
No Answer	1	6
	18	100

1 = Interesting	12	67
2 =	3	17
3 =	2	11
4 =	0	0
5 = Not Interesting	0	0
No Answer	1	5
	18	100

1 = Informative	13	72
2 =	4	22
3 =	0	0
4 =	0	0
5 = Not Informative	0	0
No Answer	1	6
	18	100

1 = Exciting	7	39
2 =	6	33
3 =	4	22
4 =	0	0
5 = Dull	0	0
No Answer	1	6
	18	100

1 = Up-to-Date	12	67
2 =	5	28
3 =	0	0
4 =	0	0
5 = Out-of-Date	0	0
No Answer	1	5
	18	100

	N	%
Position of Respondent:		
Teacher	11	61
Reading Specialist	2	11
Professor	1	6
Student (College)	2	11
School Counselor	1	6
Principal	1	6
No Answer	0	0
	18	101
Subject Taught by Respondent:		
All	7	39
Reading	4	22
Remedial Reading	1	6
Reading plus one other subject	1	5
No Answer	0	0
Not Applicable	5	28
	18	100
Type of School: (A)		
Elementary	13	72
Secondary	2	11
College	2	11
No Answer	0	0
Not Applicable	1	6
	18	100
Type of School: (B)		
Public	12	67
Private -- Church affiliated	2	11
Private -- Non-church affiliated	0	0
No Answer	4	22
	18	100
Number of Pupils in Respondent's School:		
0 - 299	3	17
300 - 599	5	28
600 - 999	1	5
1,000 - 2,499	5	28
2,500 - 4,999	1	5
5,000 - 9,999	1	6
10,000 - 24,999	0	0
25,000 +	0	0
Not applicable	2	11
	18	100

	N	%
What led you to visit the demonstration Center? (Question 2)		
College class	6	33
A genuine interest in new reading programs	5	28
Invitation from demonstration center	3	17
Recommendation of former visitors	2	11
Announcements through schools	2	11
	18	100
How did you first learn about this reading program? (Question 3)		
School administrators	5	28
Invitation by demonstration center administrator	3	17
Other teachers	3	17
College professor	3	17
Reading conference	2	11
Friend	1	5
Articles in professional journals	1	5
	18	100
How did you learn about the opportunity to see the program demonstrated here? (Question 4)		
Representative from demonstration center	6	33
School administrator	4	22
College professor	4	22
Friend	1	5.5
Seminar at demonstration center	1	5.5
Reading conference	1	5.5
No Answer	1	5.5
	18	99.0
What did you feel was most useful among the activities to which you were exposed during your visit to the demonstration center? (Question 5)		
Handout materials	12	67
Visit to classroom	4	22
Demonstrations	2	11
	18	100

What do you feel was least useful among the activities to which you were exposed during your visit to the demonstration center? (Question 6)	N	%
"Everything was useful"	4	22
No Answer	4	22
Too much theory	2	11
Lecture sessions	2	11
Too much material	2	11
Shortness of classroom visits	1	5.5
Class visitation	1	5.5
Names and companies of tests	1	5.5
"Individual Remedial"	1	5.5
	18	99.0

General Reactions, Comments, and Suggestions About
Operation of the Demonstration Center

Subject No.	
01	"The center seems to be run by persons interested in their work and good at it. I think if it's too much trouble to visit classes being taught, that video-taping class sessions would be interesting for us to see. Most of us are interested in "what to do" -- specifics."
02	"Doing a good service. Maybe need more personal verbal interaction, but time is a factor."
03	"I would have enjoyed seeing video tapes of some more of the reading teachers in operation demonstrating how to increase specific skills."
04	"The information received will be helpful in my teaching."
05	"I wish we could have visited more classrooms. We only attended one class session and time limit was short."
06	"It was very interesting and useful. I only wish it could have been spread over a much longer time so that we might have been able to absorb much more."
07	"I feel that I have been exposed to adequate information to be very helpful in developing a better reading program. This was a balanced program touching all areas of a reading program."
08	"I think it a valuable asset for any teacher of reading. More should be "set up"."
09	"One of the chief assets of this program is Mrs. Dorothy Frantz. Her manner of presenting the materials and the program is concise and enthusiastic. It is hard not to be "fired-up". She uses her past experiences in teaching to a great advantage. She brings practical ideas to teachers, of things that can be made or improvised."
10	"I found the people extremely courteous and willing to help answer our questions."
11	"I feel this demonstration center is an outstanding asset to reading instruction improvement in our area. I especially appreciate the effective work of Mrs. Frantz.

Subject No.	
12	"The clinic was excellent. It was quite informed in manner and extremely informative. The materials given will be extremely helpful in future use. Being exposed to various kinds of tests was good as I had no experience in this area. Mrs. Dorothy Frantz made the program what it is.
13	"The information and materials available through them is wonderful; also the guidance we can receive for problems we have was a pleasant surprise. Mrs. Frantz is an exciting, warm person who is willing to share all she knows."
14	"My reaction was amazement at the available help for me in my desire to help 14 - 18 year old girls learn to read who could not enjoy all the literature and all else that depends on reading. Like a motto at the clinic says from John Steinbeck, "Learning to read is the most difficult and revolutionary thing that happens to the human brain." (I would add "happens to the human for life in all areas.")"
15	"Mrs. Frantz came to our district for her demonstration as a reading workshop for our teachers. I felt she was a marvelous resource person; offered many practical ideas and suggestions. I felt she was very sincere in her interest in our problems as teachers and as a person to refer to for help or information. I feel the program is valuable, informative, and necessary. I do think letters should go out to each school within the program's service area informing teachers, principals and superintendents about the center and its program and/or services.
16	"I felt the whole day was very beneficial. In addition to what I wrote previously, I feel sharing ideas and problems is most helpful."
17	"I'm well satisfied with the information I've received."
18	"It is well staffed and I feel is doing a great service to the area."

Responses to Feedback Questions by Visitors To
Indianapolis, Indiana Demonstration Center

How did you feel about the demonstration of the reading program you saw here?

	Excellent	Good	Poor
Useful	8	2	0
Interesting	7	4	0
Informative	7	4	1
Exciting	6	5	0
Up-to-Date	7	3	2*

*One respondent checked "not useful". The response was included in the category "poor".

Indicate the primary reading series you are using. (Totals include more than one response per respondent in some cases.)

Ginn	5
MacMillan	3
Hardper-Rowe	3
Lippincott	1
Houghton Mifflin	2
Scott Foresman	1
Sullivan Programmed	1
BRL Programmed	1
BRL Sullivan	1
Merrill	1
No Answer	2

Number of tutors trained per school system:

No. of Tutors Trained	No. of Schools Reporting By Types of Tutors			
	Volunteers	Paid Tutors	One or Both Types	
	No.	No.	No.	%
0	7	1	0	
3 - 5	2	4	4	25
6 - 9	1	0	1	6
12 - 15	0	2	2	13
20 - 24	0	2	2	13
27	0	1	1	6
No Answer	6	6	6	37
	16	16	16	100

Number of children being tutored per school system:

No. of Children	No. Schools Reporting	%
0	1	6
32	2	13
40	1	6
64	1	6
84	1	6
101	1	6
125	1	6
130	2	13
222	1	6
No Answer	5	31
	16	99

Position of Respondent:	N	%
Teacher*	4	25
Professor	1	6
Reading Specialist**	4	25
Principal	2	13
Curriculum Director or Specialist	3	18
Director of Elementary Education	1	6
Language Arts Consultant	1	6
	16	99

*Teacher:

Remedial Reading	3
Special Education	1

**Specialist:

Reading Consultant	1
Reading Coordinator	1
Reading Specialist	1

Type of School: (A)

Elementary	13	81
Secondary	1	6
College	2	13
	16	100

	N	%
Type of School: (B)		
Public	8	50
Private -- Church affiliated	0	0
Private -- Non-church affiliated	0	0
No Answer	8	50
	16	100

Number of Pupils in Respondent's School:		
600 - 999	2	13
1,000 - 2,499	4	25
2,500 - 4,999	3	18
5,000 - 9,999	3	18
10,000 - 24,999	3	18
25,000 +	1	6
	16	98

What led you to visit this demonstration center?		
Read about it*	5	31
Information disseminated in local school system**	3	18
Need	1	7
Suggestion made by husband	1	7
Brought others to observe the demonstration	1	7
No Answer	5	31
	16	101

*"Read about it" includes articles, research reports, surveys, and information sent out to the school.

**"Information disseminated in local school system" consists of responses indicating that the source of information was a superintendent, principal, or Title 1 consultant.

How did you learn about the opportunity to see the program demonstrated here?		
From a consultant*	2	13
Through Indianapolis Public Schools	2	13
Information disseminated within the schools	2	13
Other teachers	1	6
Reading conference	1	6
Wrote to an organization for information	1	6
Through contact with a university	1	6
No Answer	6	37
	16	100

*Consultant category consists of state reading consultant and Title 1 consultant.

How did you first learn about this reading program?

	N	%
Word of mouth (teachers, reading consultant, friend)	5	31
Article in magazine, journal, or newspaper	3	18
Through Indianapolis Public Schools	1	6
From a consultant	2	13
Literature sent out on the project	2	13
Reading conference	1	6
Other teachers	1	6
No Answer	1	6
	16	99

What did you feel was most useful? (List includes more than one response per respondent in some cases.)

Visit to classrooms and talking with teachers using the program	5
Mrs. Nelson's explanations	2
Relationship that is possible between teacher and child	3
Tutoring experience	1
Handout materials	1
No Answer	7

What did you feel was least useful?

Only four commented. Three said, "Everything was useful", and one said the least useful part was seeing the facility in which the program office is housed.

What haven't you obtained during this visit that you wish you might have?

Help or information on tutoring with a particular program	2
Information about pre-post testing	1
Price list of additional material	1
Handouts describing the program	1

APPENDIX C

Elementary Linkage Analysis

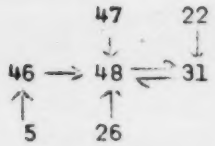
C-1 Linkages For District Panel Sample, Phase IV Data

C-2 Linkages For Brochure Panel Sample, Phase IV Data

Table C-1-1

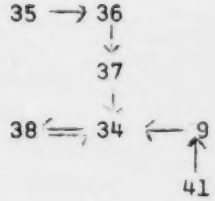
Elementary Linkage Plot of District Panel Correlation Matrix, Phase IV Data. (See sections in Methods and Findings Chapters for description.)

Linkage #1:



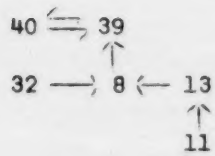
31 - Composite adoption score
5 - Number of administrative links from reading teacher to top administrator
22 - Convenience to university
26 - Number of teachers and administrators in IRA (International Reading Association)
46 - Number of years experience in administration
47 - Number of courses beyond degree
48 - Do you seek others for information

Linkage #2:



38 - Rank of school system on innovativeness
34 - Rank of school system among school systems in state on trying new reading programs
9 - How autocratic-democratic in decision making is your school system
41 - Have implemented new ideas in teaching in past year
37 - Receptivity of administrators to new ideas
36 - Receptivity of teachers to new ideas
35 - Receptivity of School Board to new ideas

Linkage #3:

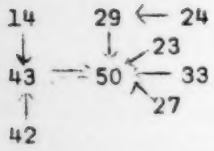


40 - Rank among other school systems on quality of teaching program
39 - Rank among other school systems on quality of reading program
8 - How often your administrator carries out recommendations voted in by teachers
32 - Wrote for leaflet about reading programs
13 - Percentage of teachers in your system with B.A.
11 - Per pupil expenditure by your school system

⇌ Indicates highest correlation in set.

→ Indicates highest level of similarity with core variable and so on through the chain.

Linkage #4:



50 - Composite external contact measure
43 - Frequency of contact with staff in school systems 15-100 miles away
42 - Frequency of contact with staff in school systems more than 100 miles away
14 - Percentage of teachers with M.A. degree
23 - Frequency of contact with university staff
27 - Number of reading conferences attended by you or one of your staff in last 12 months
24 - Are you a member of IRA
29 - Ratio: No. of IRA members/No. of reading teachers
33 - Knew about demonstration centers for the reading programs

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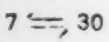
Linkage #5:



30 - A composite measure of participation in decision making
7 - Who on teaching staff is given a final vote regarding new programs

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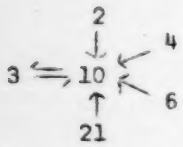
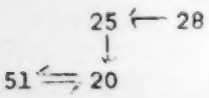
Linkage #6:



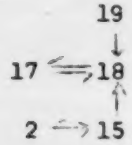
3 - Number of building principals
10 - Number of pupils
2 - Number of assistant and associate administrators
4 - Number of special program directors
6 - Who on staff is consulted when a new program is being considered
21 - Number of administrators

Linkage #7:



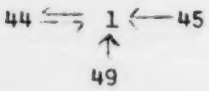
51 - Composite organizational complexity score, including number of assistant administrators
20 - Number of teachers
25 - Number of staff working with reading programs
28 - Recall receiving brochure regarding the reading programs

Linkage #8:



17 - Percentage of administrators with B.A. degree
18 - Percentage of administrators with M.A. degree
19 - Percentage of administrators with Ph.D. degree
15 - Percentage of teachers with Ph.D. degree
12 - Percentage of teachers with less than B.A.

Linkage #9:

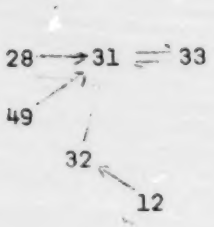


44 - Frequency of contact with school systems less than 15 miles away
1 - Proportion of time spent on reading programs by coordinator of reading programs
45 - Number of years teaching experience
49 - Others sought you out for information

Table C-2-1

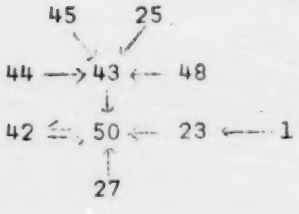
Elementary Linkage Plot of Brochure Panel
Correlation Matrix, Phase IV Data

Linkage #1:



12 - Percentage of teachers with less than B.A. degree
28 - Recall receiving brochure regarding the reading programs
31 - Composite adoption score
32 - Wrote for leaflet about reading programs
33 - Knew about demonstration centers for the reading programs
49 - Others sought you out for information

Linkage #2:



23 - Frequency of contact with university staff
25 - Number of staff working with reading program
27 - Number of reading conferences attended by you or one of your staff in last 12 months
42 - Frequency of contact with staff in school systems more than 100 miles away
43 - Frequency of contact with staff in school systems 15-100 miles away
44 - Frequency of contact with school systems less than 15 miles away
45 - Number of years teaching experience
48 - Do you seek others for information
50 - Composite external contact measure
1 - Proportion of time spent on reading programs by coordinator of reading programs

---

Linkage #3:

39 ⇌ 40

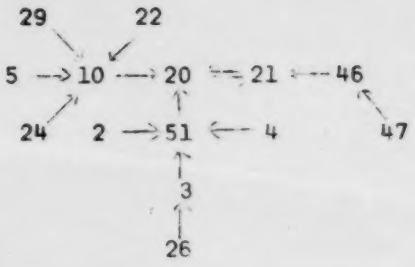
39 - Rank among other school systems on quality of reading program
40 - Rank among other school systems on quality of teaching program

---

Indicates highest correlation in set.

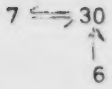
Indicates highest level of similarity with core variable and so on through the chain.

Linkage #4:



51 - Composite measure of organizational complexity
2 - Number of assistant and associate administrators
3 - Number of building principals
4 - Number of special program directors
5 - Number of administrative links from reading teacher to top administrator
10 - Number of pupils
20 - Number of teachers
21 - Number of administrators
22 - Convenience to university
24 - Are you a member of IRA
26 - Number of teachers and administrators in IRA (International Reading Association)
29 - Ratio: No. of IRA members/No. of reading teachers
46 - Number of years experience in administration
47 - Number of courses beyond degree

Linkage #5:

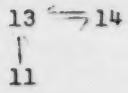


6 - Who on staff is consulted when a new program is being considered
7 - Who on teaching staff is given a final vote regarding new programs
30 - A composite measure of participation in decision making

Linkage #6:

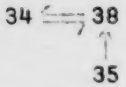
17 - Percentage of administrators with B.A. degree
18 - Percentage of administrators with M.A. degree
19 - Percentage of administrators with Ph.D. degree

Linkage #7:



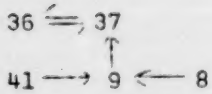
11 - Per pupil expenditure by your school system
13 - Percentage of teachers in your system with B.A. degree
14 - Percentage of teachers with M.A. degree

Linkage #8:



34 - Rank of school system among school systems in state on trying new reading programs
35 - Receptivity of school board to new ideas
38 - Rank of school system on innovativeness

Linkage #9:



8 - How often your administrator carries out recommendations voted in by teachers
9 - How autocratic-democratic in decision making is your school system
36 - Receptivity of teachers to new ideas
37 - Receptivity of administrators to new ideas
41 - Have implemented new ideas in teaching in past year

APPENDIX D

Tabulation of Data by Four Types of Samples

Table D-1 Mean Adoption Scores at Each of Four Data Collection Phases for Panel and Control Samples

Table D-2 Differences in Mean Adoption Scores Between Panel and Control Samples for Each of Four Data Collection Phases

Table D-3 Number and Percentage of Respondents Reporting Decisions Pertaining to Rejection of Programs, Phase IV Data

Table D-4 Number and Percentage of Respondents Reporting Each of the Various Behaviors Related to Participation in Decision Making as Being Characteristic of Their School System

Table D-5 Proportion of Time Devoted to Reading Programs by Respondents

Table D-6 Adoption Level for One or More of the Ten Reading Programs

Table D-7 What Respondents Said Was Needed to Make Their School System More Innovative

Table D-8 Mean Scores on Perceived Relative Advantage of the Ten Reading Programs

Table D-9 Mean Scores on Perceived Relative Complexity of the Ten Reading Programs

Table D-10 Mean Scores on Perceived Compatibility of the Ten Reading Programs With Existing Programs

Table D-11 Mean Scores on Perceived Divisibility for Trial of the Ten Reading Programs

Table D-12 Number and Percentage of Respondents Who Wrote for Leaflets Describing One or More of the Ten Reading Programs

Table D-13 What Respondents did With Leaflets Which They Received

Table D-14 Number and Percentage of Respondents Who Knew of Demonstration Centers

Table D-15 Number and Percentage of School Systems Reporting Different Levels of Receptivity to New Programs Among Three Segments of the School System

Table D-16 Respondents' Ranking of Their School System on Innovativeness, Quality of Reading Programs and Quality of Teaching

Table D-17 Level of Contact Reported by Respondents on Selected Measures of Contact External to the Respondents' School Systems

Table D-18 Simple Correlations Between Selected Pairs of Variables for District Panel Sample, Phase IV Data

Table D-19 Number and Percentage of Respondents Who Reported Their School System Had Implemented New Ideas During the Past Year to Improve Reading Instruction

Table D-20 Degrees Completed by Respondents

Table D-21 Number and Percentage of Respondents Who Reported Seeking Others for Information About the Reading Programs

Table D-1: Mean Adoption Scores at Each of Four Data Collection Phases For Panel and Control Samples

Sample Sets	Data Collection Phase I	II	III	IV
District Panel	0.44	0.85	1.08	1.16
District Control	x	0.45	0.57	0.50
Brochure Panel	1.32	1.54	1.90	1.90
Brochure Control	x	0.61	0.72	0.74

Table D-2: Differences in Mean Adoption Scores Between Panel and Control Samples for Each of Four Data Collection Phases

Sample Pairs	Data Collection Phase I	II	III	IV
Brochure Panel - Brochure Control	x	0.93***	1.18***	1.16***
District Panel - District Control	x	0.40*	0.51*	0.66**
District Panel - Brochure Panel	-0.88***	-0.69***	-0.82***	-0.74***
Brochure Control - District Control	x	0.16	0.15	0.24

*Significant at .05 level
**Significant at .005 level
***Significant at .001 level

Table D-3: Number and Percentage of Respondents Reporting Decisions Pertaining to Rejection of Programs, Phase IV Data

Rejection Decision	Sample Set: Brochure Panel N	%	District Panel N	%
Yes	2	2.1	1	0.5
No	6	6.2	4	2.0
Haven't Decided	5	5.2	1	0.5
No Answer*	84	86.5	185	97.0
	97	100	191	100.0

*Includes both those who have decided to adopt full-scale and those who have not yet reached this decision stage.

Table 4: Number and Percentage of Respondents Reporting Each of the Various Behaviors Related to Participation in Decision Making as Characteristic of Their School System For Each of Four Types of Samples

Participative Action	Sample Sets: District Panel N	%	District Control N	%	Brochure Panel N	%	Brochure Control N	%
Who gets consulted about new programs:								
1. None of teaching staff	7	3.7	10	5.4	4	4.2	6	4.1
2. Some group of affected staff	62	32.4	24	12.8	25	26.0	28	19.0
3. Some group of total staff	25	13.1	76	40.6	15	15.6	55	37.4
4. All affected teachers	76	39.8	56	30.0	39	40.6	35	23.8
5. All teachers	21	11.0	21	11.2	13	13.5	23	15.7
TOTAL	191	100.0	187	100.0	96	99.9	147	100.0
Who votes on final decision:								
1. None of teaching staff	33	17.3	23	12.3	16	16.5	20	13.6
2. Some group of affected staff	56	29.4	26	13.9	27	27.8	27	18.4
3. Some group of total staff	51	26.7	37	19.8	20	20.6	23	15.6
4. All affected teachers	36	18.9	67	35.8	24	24.7	45	30.6
5. All teachers	15	7.7	22	11.8	10	10.4	21	14.3
No Answer	0	0.0	12	6.4	0	0.0	11	7.5
TOTAL	191	100.0	187	100.0	97	100.0	147	100.0
How often administrator carries out vote of staff:								
1. Nearly always	119	66.1	110	61.1	59	62.1	90	62.9
2. 3/4 of the time	30	16.7	36	20.0	18	18.9	22	15.4
3. 1/2 of the time	24	13.3	21	11.7	13	13.7	21	14.7
4. 1/4 of the time	4	2.2	4	2.2	3	3.2	5	3.5
5. Hardly ever	3	1.7	9	5.0	2	2.1	5	3.5
TOTAL	180	100.0	180	100.0	95	100.0	143	100.0

Table D- 4: Continued

Participative Action	Sample Sets: District Panel N	%	District Control N	%	Brochure Panel N	%	Brochure Control N	%
Perceived level of decision making:								
1. Very autocratic	2	1.1	6	3.2	1	1.0	5	3.4
2. Somewhat autocratic	10	5.3	19	10.0	4	4.2	11	7.5
3. Somewhat democratic	88	46.6	83	43.9	45	46.9	64	43.5
4. Very democratic	89	47.1	81	42.9	46	47.9	67	45.6
TOTAL	189	100.1	189	100.0	96	100.0	147	100.0

Table D- 5: Proportion of Time Devoted to Reading Programs by Respondents in Each of Four Sample Sets, Phase IV Data for Panel Samples and Phases II, III and IV for Control Samples

Proportion of Time Devoted to Reading Programs	Sample Sets: District Panel N	%	District Control N	%	Brochure Panel N	%	Brochure Control N	%
1. 1/4 time	111	59.7	112	59.6	57	61.3	89	61.8
2. 1/2 time	14	7.5	17	9.0	5	5.4	14	9.7
3. 3/4 time	14	7.5	17	9.0	8	8.6	8	5.6
4. Full time	47	25.3	42	22.4	23	24.7	33	22.9
TOTAL	186	100.0	188	100.0	93	100.0	144	100.0

Table D-6: Adoption Level for One or More of Ten Reading Programs by Type of Sample (Phase IV Data for Panel Samples; Phases II, III, and IV for Control Samples.)

Adoption Level for One or More of the Reading Programs	Type of Sample: District Panel N	District Panel %	District Control N	District Control %	Brochure Panel N	Brochure Panel %	Brochure Control N	Brochure Control %
No action (not aware, except for interview)	134	70.9	135	71.4	45	46.9	93	62.8
Aware	0	0.0	34	18.0	0	0.0	29	19.6
Sought information	23	12.2	11	5.8	27	28.1	15	10.1
Considered use	20	10.6	6	3.2	12	12.5	8	5.4
Trial use	5	2.6	2	1.1	2	2.1	2	1.4
Full-scale use	7	3.7	1	0.5	10	10.4	1	0.7
TOTAL	189	100.0	189	100.0	96	100.0	148	100.0

Table D-7: What Respondents Said was Needed to Make Their School System More Innovative, for Each of the Sample Sets

What is Needed to be More Innovative	Sample Sets: District Panel N	District Panel %	District Control N	District Control %	Brochure Panel N	Brochure Panel %	Brochure Control N	Brochure Control %
Money	68	37.4	74	41.3	30	33.7	47	32.2
In-service training	26	14.3	13	7.3	14	15.7	24	16.4
Change attitudes	21	11.5	18	10.1	16	18.0	7	4.8
Administrative structure	14	7.7	16	8.9	13	14.6	10	6.8
Administrative climate	8	4.4	6	3.4	0	0.0	8	5.5
Expose to new ideas	8	4.4	19	10.6	7	7.9	10	6.8
Consultants, use of	0	0.0	5	2.8	0	0.0	2	1.4
Reward system	1	0.6	4	2.2	0	0.0	0	0.0
Other	36	19.8	24	13.4	9	10.1	38	26.0
TOTAL	182	100.1	179	100.0	89	100.0	146	100.0

Perceived Characteristics of Reading Programs

Table D-8: Mean Scores on Perceived Relative Advantage of Each of Ten Programs for Brochure and District Panel Samples, Phase IV Data (Values of answers range from 0 = much better; to 4 = much worse. See Question #34 in Appendix A-1.)

Reading Programs	Brochure Panel $\bar{x}$	N_1*	N_2**	District Panel $\bar{x}$	N_1*	N_2**
Marysville, California	1.33	(12)	[85]	1.60	(10)	[181]
Chicago Heights, Illinois				1.86	(7)	[184]
Pojoaque, New Mexico	2.13	(8)	[89]	1.8	(5)	[186]
Indianapolis, Indiana	1.71	(14)	[83]	1.91	(11)	[180]
New York City, New York	1.67	(6)	[91]	1.86	(7)	[184]
Thomasville, Georgia	1.83	(12)	[85]	1.56	(9)	[182]
Milwaukee, Wisconsin	1.85	(13)	[84]	1.50	(10)	[181]
Topeka, Kansas	1.56	(9)	[88]	1.44	(9)	[182]
Hartford, Conneticut	1.82	(11)	[86]	2.00	(6)	[185]
Keokuk, Iowa	1.60	(5)	[92]	1.50	(8)	[183]

Table D-9: Mean Scores on Perceived Relative Complexity of Each of Ten Programs for Brochure and District Panel Samples, Phase IV Data (Values of answers range from 0 = very complex; to 3 = not complex at all. See Question #35 in Appendix A-1.)

Reading Programs	Brochure Panel $\bar{x}$	N_1*	N_2**	District Panel $\bar{x}$	N_1*	N_2**
Marysville, California	1.45	(11)	[86]	1.75	(8)	[183]
Chicago Heights, Illinois	1.17	(6)	[91]	1.33	(3)	[188]
Pojoaque, New Mexico	1.60	(10)	[87]	1.50	(4)	[187]
Indianapolis, Indiana	1.75	(16)	[81]	1.62	(13)	[178]
New York City, New York	1.83	(6)	[91]	1.50	(6)	[185]
Thomasville, Georgia	1.90	(10)	[87]	1.83	(6)	[185]
Milwaukee, Wisconsin	1.83	(12)	[85]	1.43	(7)	[184]
Topeka, Kansas	1.44	(9)	[88]	1.73	(11)	[180]
Hartford, Conneticut	1.57	(14)	[83]	1.50	(8)	[183]
Keokuk, Iowa	1.50	(6)	[91]	1.80	(5)	[186]
Present Program	1.67	(12)	[85]	1.57	(14)	[177]

For tables 8 to 9,

N_1* - Figures in parenthesis are the numbers of subjects who gave answers to the question (see questionnaire).

N_2** - Figures in brackets are for subjects who gave no answers to the question. They said they didn't know enough about the programs to reply.

Table D-10: Mean Scores on Perceived Compatibility With Existing School Methods for Each of Ten Programs for Brochure and District Panel Samples, Phase IV Data (Values of answers range from 0 = fits very well; to 3 = doesn't fit at all. See Question #36 in Appendix A-1.)

Reading Programs	Brochure Panel $\bar{x}$	N_1*	N_2**	District Panel $\bar{x}$	N_1*	N_2**
Marysville, California	1.38	(8)	[89]	1.64	(11)	[180]
Chicago Heights, Illinois	1.83	(6)	[91]	1.43	(7)	[184]
Pojoaque, New Mexico	1.90	(10)	[87]	1.50	(4)	[187]
Indianapolis, Indiana	1.40	(15)	[82]	1.50	(10)	[181]
New York City, New York	1.50	(6)	[91]	2.00	(6)	[185]
Thomasville, Georgia	1.71	(7)	[90]	1.44	(9)	[182]
Milwaukee, Wisconsin	1.18	(11)	[86]	1.30	(10)	[181]
Topeka, Kansas	1.29	(7)	[90]	1.50	(12)	[179]
Hartford, Conneticut	1.36	(11)	[86]	1.71	(7)	[184]
Keokuk, Iowa	1.75	(4)	[93]	1.67	(6)	[185]

Table D-11: Mean Scores on Perceived Divisibility for Trial of Each of Ten Programs for Brochure and District Panel Samples, Phase IV Data (Values of answers range from 0 = very easy; to 3 = very difficult. See Question #37 in Appendix A-1.)

Reading Programs	Brochure Panel $\bar{x}$	N_1*	N_2**	District Panel $\bar{x}$	N_1*	N_2**
Marysville, California	1.92	(12)	[85]	1.64	(11)	[180]
Chicago Heights, Illinois	1.70	(10)	[87]	1.44	(9)	[182]
Pojoaque, New Mexico	1.50	(8)	[89]	1.67	(6)	[185]
Indianapolis, Indiana	1.69	(16)	[81]	2.00	(8)	[183]
New York City, New York	1.57	(7)	[90]	2.00	(7)	[184]
Thomasville, Georgia	1.25	(12)	[85]	1.72	(7)	[184]
Milwaukee, Wisconsin	1.62	(13)	[84]	1.60	(10)	[181]
Topeka, Kansas	1.60	(10)	[87]	1.75	(8)	[183]
Hartford, Conneticut	1.47	(15)	[82]	2.00	(5)	[186]
Keokuk, Iowa	1.50	(2)	[95]	1.56	(9)	[182]

For tables 10 to 11,

N_1* - Figures in parenthesis are the numbers of subjects who gave answers to the question (see questionnaire).

N_2** - Figures in brackets are for subjects who gave no answers to the question. They said they didn't know enough about the programs to reply.

Table D-12: Number and Percentage of Respondents Who Wrote for Leaflets Describing One or More of the Reading Programs, for Each of Four Sample Types

Wrote for Leaflets	Sample Sets: District Panel N	District Panel %	District Control N	District Control %	Brochure Panel N	Brochure Panel %	Brochure Control N	Brochure Control %
Yes	42	21.2	17	12.5	42	43.3	31	27.2
No	156	78.8	119	87.5	55	56.7	83	72.8
TOTAL	198	100.0	136	100.0	97	100.0	114	100.0

Table D-13: What Respondents Did With Leaflets Which They Received, for Each of Four Sample Types

Action Taken With Leaflet	Sample Sets: District Panel N	District Panel %	District Control N	District Control %	Brochure Panel N	Brochure Panel %	Brochure Control N	Brochure Control %
Read it	6	14.3	2	20.0	4	12.1	3	13.0
Read and circulated	21	50.0	4	40.0	17	51.5	8	34.8
Read and filed	7	16.7	2	20.0	6	18.2	3	13.0
Read and destroyed	0	0.0	0	0.0	0	0.0	0	0.0
Not read and destroyed	0	0.0	0	0.0	0	0.0	0	0.0
Not read and circulated	4	9.5	0	0.0	5	15.2	4	17.4
Not read and filed	0	0.0	0	0.0	1	3.0	1	4.4
Used for discussion	4	9.5	2	20.0	0	0.0	4	17.4
TOTAL	42	100.0	10	100.0	33	100.0	23	100.0

Table D-14: Number and Percentage of Respondents Who Knew of Demonstration Centers, for Each of Four Sample Types

Knew of Demonstration Centers	Sample Sets: District Panel N	District Panel %	District Control N	District Control %	Brochure Panel N	Brochure Panel %	Brochure Control N	Brochure Control %
Yes	27	14.2	12	6.4	20	20.6	14	9.5
No	163	85.8	176	93.6	77	79.4	133	90.5
TOTAL	190	100.0	188	100.0	97	100.0	147	100.0

Table D-15: Number and Percentage of School Systems Reporting Different Levels of Receptivity to New Programs for School Board, Teachers and Administrators

Levels of Receptivity for Three Segments of School System	Sample Sets: District Panel N	District Panel %	District Control N	District Control %	Brochure Panel N	Brochure Panel %	Brochure Control N	Brochure Control %
A. School Board is:								
1. Very resistant	2	1.1	3	1.6	1	1.0	2	1.4
2. Somewhat resistant	19	10.2	18	9.6	6	6.2	17	11.6
3. Indifferent	6	3.2	13	6.9	4	4.1	2	1.4
4. Somewhat receptive	91	48.7	100	53.2	43	44.3	79	54.1
5. Very receptive	69	36.9	54	28.7	43	44.3	46	31.5
TOTAL	187	100.1	188	100.0	97	99.9	146	100.0
B. Teachers are:								
1. Very resistant	1	0.5	4	2.1	1	1.0	0	0.0
2. Somewhat resistant	21	11.0	15	8.0	4	4.2	13	8.9
3. Indifferent	2	1.0	11	5.9	8	8.3	5	3.4
4. Somewhat receptive	125	65.5	117	62.2	53	55.2	97	66.4
5. Very receptive	42	22.0	41	21.8	30	31.3	31	21.2
TOTAL	191	100.0	188	100.0	96	100.0	146	99.9

Table D-15: Continued

Levels of Receptivity for Three Segments of School System	Sample Sets: District Panel N	District Panel %	District Control N	District Control %	Brochure Panel N	Brochure Panel %	Brochure Control N	Brochure Control %
C. Administrators are:								
1. Very resistant	2	1.0	2	1.1	1	1.0	0	0.0
2. Somewhat resistant	20	10.5	14	7.4	6	6.25	11	7.5
3. Indifferent	4	2.1	10	5.3	6	6.25	1	0.7
4. Somewhat receptive	107	56.0	107	56.9	42	43.8	74	50.7
5. Very receptive	58	30.4	55	29.3	41	42.7	60	41.1
TOTAL	191	100.0	188	100.0	96	100.0	146	100.0

Table D-16: Respondents' Ranking of Their School Systems on Innovativeness, Quality of Reading Programs, and Quality of Teaching

Characteristic of School System and Rank	Sample Sets: District Panel N	District Panel %	District Control N	District Control %	Brochure Panel N	Brochure Panel %	Brochure Control N	Brochure Control %
A. Innovativeness compared to other school:								
1. Much more	20	10.5	26	13.8	15	15.6	25	17.0
2. Somewhat more	78	41.1	64	34.1	30	31.3	61	41.5
3. About the same	59	31.1	65	34.6	36	37.5	40	27.2
4. Somewhat less	24	12.6	29	15.4	13	13.5	18	12.2
5. Much less	9	4.7	4	2.1	2	2.1	3	2.0
TOTAL	190	100.0	188	100.0	96	100.0	147	99.9

Table D-16: Continued

Characteristic of School System and Rank	Sample Types: District Panel N	District Panel %	District Control N	District Control %	Brochure Panel N	Brochure Panel %	Brochure Control N	Brochure Control %
B. When it comes to trying new reading programs, my school system tends to be:								
1. Among the first	15	7.9	16	8.6	11	11.5	15	10.2
2. Somewhat earlier than most	53	27.9	36	19.2	27	28.1	48	32.7
3. In the middle	91	47.9	98	52.4	39	40.6	64	43.5
4. Somewhat later than most	22	11.6	32	17.1	16	16.7	16	10.9
5. Among the last	9	4.7	5	2.7	3	3.1	4	2.7
TOTAL	190	100.0	187	100.0	96	100.0	147	100.0
C. Rank among other school systems in state on quality of reading program:								
1. Upper 1/4	91	48.7	80	42.8	39	40.6	61	41.8
2. Second 1/4	67	35.8	78	41.7	41	42.7	65	44.5
3. Third 1/4	25	13.4	28	15.0	15	15.6	18	12.3
4. Lower 1/4	4	2.1	1	0.5	1	1.0	2	1.4
TOTAL	187	100.0	187	100.0	96	99.9	146	100.0
D. Rank among other school systems in state on quality of teaching program:								
1. Upper 1/4	81	43.3	76	40.6	41	42.3	58	39.7
2. Second 1/4	80	42.8	84	45.0	44	45.3	73	50.0
3. Third 1/4	24	12.8	26	13.9	12	12.4	15	10.3
4. Lower 1/4	2	1.1	1	0.5	0	0.0	0	0.0
TOTAL	187	100.0	187	100.0	97	100.0	146	100.0

Table D-17: Level of Contact Reported by Respondents on Selected Measures of Contact External to the Respondents' School Systems

Level of Contact by Each of Several Measures	Sample Sets: District Panel N	District Panel %	District Control N	District Control %	Brochure Panel N	Brochure Panel %	Brochure Control N	Brochure Control %
A. Number of reading conferences or professional meetings attended in last 12 months:								
1. None	7	3.7	4	2.1	1	1.0	2	1.4
2. One	6	3.2	15	8.0	8	8.3	10	6.8
3. Two to three	45	23.7	48	25.7	17	17.5	26	17.8
4. Four to five	35	18.4	33	17.7	18	18.6	35	24.0
5. More than five	97	51.0	87	46.5	53	54.6	73	50.0
TOTAL	190	100.0	187	100.0	97	100.0	146	100.0
B. How convenient for school staff to visit a college or university:								
1. Very convenient	116	60.7	111	58.7	64	66.0	98	66.7
2. Somewhat convenient	42	22.0	43	22.8	19	19.6	31	21.1
3. Somewhat inconvenient	23	12.0	24	12.7	12	12.4	15	10.2
4. Very inconvenient	10	5.2	11	5.8	2	2.0	3	2.0
TOTAL	191	99.9	189	100.0	97	100.0	147	100.0
C. Frequency of reading staff contact with college or university:								
1. Once a week or more	27	14.4	37	19.6	13	13.5	18	12.3
2. 1-3 times per month	29	15.5	28	14.8	17	17.7	26	17.8
3. 6-11 times a year	44	23.5	33	17.5	19	19.8	27	18.5
4. 1-5 times a year	60	32.1	67	35.4	42	43.8	55	37.7
5. Less than once a year	27	14.4	24	12.7	5	5.2	20	13.7
TOTAL	187	99.9	189	100.0	96	100.0	146	100.0

Table D-17: Continued

Level of Contact by Each of Several Measures	Sample Sets: District Panel N	District Panel %	District Control N	District Control %	Brochure Panel N	Brochure Panel %	Brochure Control N	Brochure Control %
D. Frequency of contact with schools more than 100 miles away:								
1. One or more times a week	6	3.3	1	0.5	3	3.2	1	0.7
2. At least once a month	14	7.6	20	10.9	10	10.5	14	9.5
3. At least once a year	54	29.3	63	34.2	26	27.4	48	32.7
4. Seldom	110	59.8	100	54.4	56	58.9	84	57.1
TOTAL	184	100.0	184	100.0	95	100.0	147	100.0
E. Frequency of contact with schools 15-100 miles away:								
1. One or more times a week	8	4.2	9	4.9	6	6.2	4	2.7
2. At least once a month	60	31.8	61	33.2	34	35.4	50	34.3
3. At least once a year	63	33.3	72	39.1	35	36.5	59	40.4
4. Seldom	58	30.7	42	22.8	21	21.9	33	22.6
TOTAL	189	100.0	184	100.0	96	100.0	146	100.0
F. Frequency of contact with schools less than 15 miles away:								
1. One or more times a week	17	9.2	19	11.2	13	14.3	16	11.5
2. At least once a month	74	40.2	69	40.6	37	40.7	50	36.0
3. At least once a year	59	32.1	38	22.3	19	20.9	44	31.6
4. Seldom	34	18.5	44	25.9	22	24.2	29	20.9
TOTAL	184	100.0	170	100.0	91	100.1	139	100.0

Table D-18: Simple Correlations Between Selected Pairs of Variables for the District Panel Sample, Phase IV Data

Pairs of Variables	Simple Correlations
External contact and adoption measure	0.31*
External contact and ratio of IRA membership to number of reading teachers	0.53*
External contact and perceived innovativeness of system	0.16
External contact and convenience to university	0.53*
External contact and number of reading conferences attended	0.50*
External contact and participation in decision making	-0.02
External contact and organizational complexity	-0.67*
Participation in decision making and adoption level	-0.06
Participation in decision making and perceived innovativeness of system	0.07
Participation in decision making and organizational complexity	0.05
Organizational complexity and adoption level	0.16
Organizational complexity and perceived innovativeness of system	0.24*
Organizational complexity and number of links from top administrator to reading teacher	0.66*
Perceived innovativeness of system and adoption level	0.13
Knew of demonstration centers and adoption level	0.37*
Knew of demonstration centers and perceived innovativeness of system	0.06
Knew of demonstration centers and participation in decision making	-0.18
Knew of demonstration centers and organizational complexity	0.09
Time devoted to reading program by respondent and adoption level	0.04
Number of pupils and organizational complexity	0.79*

(Measures of external contact, organizational complexity, and participation in decision making are derived composite measures.)

*Significant at .05 level

Table D-19: Number and Percentage of Respondents Who Reported Their School System Had Implemented New Ideas During the Past Year to Improve Reading Instruction

Implemented Ideas in Last Year To Improve Reading Instruction	Sample Sets: District Panel N	%	District Control N	%	Brochure Panel N	%	Brochure Control N	%
Yes	179	93.7	165	87.8	92	94.8	129	87.8
No	12	6.3	23	12.2	5	5.2	18	12.2
TOTAL	191	100.0	188	100.0	97	100.0	147	100.0

Table D-20: Degrees Completed By Respondents

Degrees Completed By Respondents	Sample Sets: District Panel N	%	District Control N	%	Brochure Panel N	%	Brochure Control N	%
B.A.	189	100.0	180	95.0	97	100.0	143	97.3
M.A.	171	90.0	155	82.0	88	90.7	130	88.4
Ph.D.	23	12.0	14	7.4	10	10.3	8	5.4
N =	(191)		(189)		(97)		(147)	

Table D-21: Number and Percentage of Respondents Who Reported Seeking Others for Information About the Reading Programs

Information Seeking Behavior	Sample Sets: District Panel N	%	District Control N	%	Brochure Panel N	%	Brochure Control N	%
Sought information from others:								
Yes	19	10.0	9	4.8	17	17.5	11	7.5
No & No Answer	172	90.0	180	95.2	80	82.5	136	92.5
TOTAL	191	100.0	189	100.0	97	100.0	147	100.0
Others sought you for information:								
Yes	12	6.3	40	21.2	11	11.3	44	29.9
No & No Answer	179	93.7	149	78.8	86	88.7	103	70.1
TOTAL	191	100.0	189	100.0	97	100.0	147	100.0